CONSTRUCTION NEWS

Supplement to ENGINEERING NEWS. New York, January 5, 1911.

CONTENTS.

CONSTRUCTION NEWS:
Railways 1
Electric Railways 1
Light and Power Plants 1
Bridges 2
Buildings 3
Water Supply and Irrigation 4
Sewerage 5
Garbage Disposal 5
Streets and Roads 5
Manufacturing Plants 6
Miscellaneous Contracts 7
U. S. Possessions and Cuba 8
Foreign Contracts 8
Contract Prices 9
Plans and Specifications on File 12
List of Contracts Pending 12
EXAMINATIONS 10
INDUSTRIAL NOTES 10
TRADE PUBLICATIONS 12
CURRENT PRICES OF ENGINEERING MATERIALS 13-16
PROPOSALS 16

RAILWAYS.

(*Denotes that this work is advertised in Engineering News.)

ALABAMA.—According to press reports the Washington & Choctaw Ry. Co., capitalized at $700,000, of which $200,000 has been paid in, will build a road from Yellow Pine, Washington County, northeasterly to a point 18 miles south of Butler, Choctaw County, about 30 miles. J. W. Gilchrist, George T. Baker, J. T. Burlingame and S. H. Bolinger, Yellow Pine, Ala., are the incorporators.

ARIZONA.—Press advices are to the effect that the Utah & Grand Canyon R. R. Co. will build a 500-mile line into the Grand Canyon. This will connect with the Santa Fe at Marysville, Nev., and with the San Pedro, Los Angeles & Salt Lake R. R. at Lund, Utah. John W. Burke, 45 Broadway, New York, N. Y., is interested.

ARKANSAS.—A charter has been received by George N. Locke for the Oklahoma & Western R. R. The route is practically identical with that noted on Dec. 22 under Kansas City & Memphis R. R. George N. Locke, Little Rock, Ark., is Vice-Pres. and Gen. Mgr.

BUCKHANNON & NORTHERN R. R.—S. D. Brady, Morgantown, W. Va., Ch. Engr., has asked for bids until Jan. 16 for the construction of this road. Work must be completed by Oct. 1. J. T. Blair, 548 Oliver Bldg., Pittsburg, Pa., is Secy. Noted on Dec. 8.

CENTRAL VERMONT R. R. CO.—A petition has been presented to the Vermont authorities to permit the construction of a line from Windsor to Brattleboro, Vt., 67 miles. J. M. Morrison, St. Albans, Vt., is Engr.

COLORADO.—The Pueblo & Southeastern R. R. Co. will build a line, at an early date, between Pueblo and Wilson, a new town, 15 miles southeast. It may be extended later in a southeasterly direction. William J. Lester, of the Pueblo-Rocky Ford Irrigation Co., Rocky Ford, Colo., is interested.

COLORADO & SOUTHERN RY.—The contract for the construction of the 32-mile line from Wellington, Colo., north to Cheyenne, Wyo., has been awarded to THE KILPATRICK CONSTRUCTION CO., Beatrice, Neb. Noted on Sept. 15.

COPPER RIVER & NORTHWESTERN RY.—The 300-mile extension of the Copper River & Western Ry., from Chitina to Fairbanks, Alaska, will be started about Mar. 1, according to press reports. The cost is estimated at $30,000,000. E. C. Hawkins, Seattle, Wash., is Gen. Mgr. and Ch. Engr.

ERIE R. R.—It is reported that the grade crossings of the Erie R. R. in Jamestown, N. Y., will be eliminated at a cost of $500,000. F. L. Stuart, 50 Church St., New York, N. Y., is Ch. Engr.

LOUISVILLE & NASHVILLE R. R.—The surveys and estimates have been completed for double-tracking the line from Edgefield Junction, Tenn., to Decatur, Ala., about 130 miles, at a cost of about $3,500,000. W. H. Courtenay is Ch. Engr., Louisville, Ky.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE RY.—Work will begin in the early spring, it is reported, on an extension of this line from Ambrose, N. Dak., to Plentywood, Mont., a distance of about 50 miles. Thomas Green, Minneapolis, Minn., is Ch. Engr.

MISSOURI, KANSAS & TEXAS RY.—It is reported that this company will extend its lines southward from San Antonio, Tex. S. B. Fisher, St. Louis, Mo., is Ch. Engr.

OHIO.—A company has been formed to build a line from Huntington to Ashland, Ohio, 20 miles. N. P. Ramsey, Vice-Pres. and Gen. Mgr. of the Ashland & Western Ry., is interested in this company. His address is Ashland, Ohio.

OHIO.—Columbus.—The Columbus Connecting R. R. Co. has been incorporated to build a steam railway around Columbus. The officers are: C. O. Hunter, formerly general counsel for the Hocking Valley R. R. Co., Pres.; Louis F. Kiesewetter, Secy.; Franz R. Huntington, Treas.; and C. O. Hunter, O. Eli Gwinn, Dennis Kelley, Franz R. Huntington and L. L. F. Kissewetter directors. Stanley Pugh is Ch. Engr. Noted on Dec. 29.

OKLAHOMA.—The contract has been awarded by The Cherryvale, Oklahoma & Texas Ry. Co., to the CONTINENTOL CONSTRUCTION CO., for the building of 115 miles of road, a main line of 50 miles from Caney, Kan., to Pawhuska, Okla., and a branch line of 65 miles from Vinita, Okla., to Siloam Springs, Ark.

OKLAHOMA.—St. Louis & Oklahoma R. R. line is contemplated from Bromide to Colgate, 18 miles. E. T. Brown, Colgate, Okla., is Ch. Engr.

PANAMA.—The Assembly recently approved the bill authorizing President Arosemena to receive bids for the construction of the Panama-David Railroad. The cost of this work is not to exceed $10,000,000, for which the government may issue 5% bonds. The bids will be opened at the end of four months.

PENNSYLVANIA R. R.—Press dispatches state that Pres. James McCrea, on Dec. 27, announced to the directors that the principal features of the improvements to be made in connection with the Greater Broad St. Station scheme would be the electrification of all its suburban lines in the vicinity of Philadelphia. Alexander Shand, Philadelphia, is Ch. Engr.

TEXAS.—The contract for the construction of the Port Bolivar Iron Ore Ry., from Longview to the iron ore fields in Cass County, 30 miles, has been let to the C. P. SHART CONSTRUCTION CO., Kansas City, Mo. The right of way for the proposed line is now being obtained, and grading will soon be started. Noted on Dec. 22.

UNION PACIFIC R. R.—It is reported that a line from Denver to Ft. Morgan, Colo., 150 miles, will be built. R. L. Huntley, Omaha, Neb., is Ch. Engr.

WEST VIRGINIA.—The Morgantown & Southern Ry. Co., proposes to build 27 miles of line from Morgantown to Fairmont, W. Va., the character of country ranging from level to rough. E. Herch is Secy. and Gen. Mgr. J. L. Johnson is Ch. Engr.

ELECTRICAL RAILWAYS.

PRESQUE ISLE, ME. — The Aroostook Valley R. R. is contemplating the construction of two extensions, one to begin at Washington Station in Presque Isle and extend across Woodland to New Sweden; the other line to extend through Caribou to Limestone. H. M. Heath Presque Isle, is Secy.

STAMFORD, VT.—A franchise has been granted the Bennington & North Adams St. Ry. to construct an electric line in Stamford. C. Q. Richmond is Gen. Mgr.

MOODUS, CONN.—The Moodus & East Hampton Electric Ry. Co. has made application for a charter to construct an electric line connecting Moodus, Marlboro Mills and East Hampton.

NORWICH, CONN.—It is reported that the Norwich, Colchester & Hartford Traction Co. will petition the General Assembly for an amendment to its charter, thus gaining another entrance to Norwich.

STONINGTON, CONN.—It is reported that the Groton & Stonington St. Ry. has filed a petition with the Secretary of State asking for an amendment to its charter, granting it the right to construct tracks on various streets in Stonington. Chas. D. Noyes, Norwich, Conn., is Secy.

WATERBURY, CONN.—It is reported by the press of this city that the Connecticut Co. has filed a petition with the Secretary of State, asking the General Assembly to grant a charter right to build a loop line through Pearl Lake Road, connecting the present Baldwin St. and South Main St. lines.

NEW YORK, N. Y.—Bids will be received until 1:30 p. m., Jan. 20, for electric freight and passenger cars by M. Gray Zalinski, Deputy Q. M. General, U. S. A. Depot, Q. M., Army Bldg., New York.

NEW YORK, N. Y.—The Interborough Rapid Transit Co. has received from the Public Service Commission a certificate of public necessity and convenience for the building of third tracks on the Second, Third and Ninth Ave. elevated roads. The company has also approved plans for extending the Third Ave. line to Mt. Vernon and the Ninth Ave. line to Woodlawn.

LAKEWOOD, N. J.—The Trenton, Lakewood & Atlantic Ry. has made application to the Township Committee for a franchise to construct an electric railway on Ocean Ave., in Point Pleasant. George O. Vanderbilt is Gen. Mgr.

TITUSVILLE, PA.—According to press reports the Titusville Electric Traction Co. is considering plans for the construction of a two-mile extension to its line. W. J. Smith, Titusville, is Gen. Mgr.

FREDERICK, MD.—It is reported that the Frederick R. R. is electrifying the Thurmont Division of its line, and service will be maintained between Montevue Hospital, Frederick and Schleysville. C. E. Waters, Frederick, is Secy.

FLOYD, VA.—The North Carolina Traction Co., which proposes to build an interurban electric line from Floyd to Winston-Salem, N. C., will award contracts in January for the construction of the line which will be two miles in length.

EDGEWOOD, W. VA.—The City & Elm Grove R. R., Wheeling, has applied to the City Council for a franchise to build an electric line over certain streets. J. W. Smith is Gen. Mgr.

RIDGEWAY, N. C.—The North Carolina Ry. has been chartered to construct a six-mile railway from Ridgeway to the North Carolina line. George Demarest, Brooklyn, S. C., is Secy.

ST. SIMONS ISLAND, GA.—The St. Simons Ry. Co. will operate its proposed four-mile line on St. Simons Island with gasoline motor cars.

FORT MYERS, FLA.—A franchise has been granted the Seminole Power & Ice Co. to operate an electric railway in Fort Myer. A. Gardner, Fort Myer, is interested.

GULFPORT, MISS.—The Gulfport & Mississippi Coast Traction Co. is said to be considering plans for the extension of its North Gulfport Ave. and Twenty-fifth Ave. line to Bayou Banard.

NEW ORLEANS, LA.—It is reported that A. L. Black has purchased from the parish of St. Bernard the franchise to construct a line between the Barracks and the plant of the American Sugar Refining Co.

MURRAY, KY.—The Murray Traction Co. commenced preliminary surveys for the construction of its proposed line from Murray to the Tennessee River. Nath Ryan, Murray, is Pres.

COLUMBUS, OHIO.—The Columbus Connecting Ry. Co., which was incorporated several weeks ago to build a belt line around the city of Columbus, has been organized by the election of C. O. Hunter, Pres.; Louis F. Keisewetter, Secy.; Franz R. Huntington, Treas.; and C. O. Hunter, O. E. Gwinn, Dennis Kelly, Franz R. Huntington, Louis F. Keisewetter, directors. Stanley F. Pugh has been selected as engineer.

BRAZIL, IND. — Official steps have been taken for the construction of an electric railroad from Brazil to Jasonville. H. E. Weinland, Brazil, is Treas. of the organization.

FT. WAYNE, IND.—The Ft. Wayne and Wabash Valley Traction Co., Ft. Wayne, Ind., and a number of other traction companies are preparing to let contracts for the installation of block signal systems.

MONTICELLO, IND.—Eugene Purtell, Pres. of the Indiana Northwestern Traction Co., Monticello, Ind., announces that construction work will be begun in Jasper County in early spring.

BAY CITY, MICH.—The City Council has been applied to by C. D. Rose for a franchise to construct an electric railway in Bay City.

HIGHLAND, ILL.—The contract has been granted to the St. Louis & Eastern Traction Co., East St. Louis, to construct an electric railway through Highland, connecting Granite City, Highland, Troy, Pierson, Pocahontas and Greenville. A. W. Crawford, Hillsboro, is interested.

WHITEWATER, WIS.—The Railroad Commission has been applied to by the Badger Railway & Light Co. for a certificate of Public convenience and necessity to construct a line from Whitewater to Lake Geneva via Elkhorn. G. Prickhardt is Secy.

KANSAS CITY, MO.—A franchise has been granted the Kansas City Railway & Light Co. to construct a cross-town line in Kansas.

CLEBURNE, TEX.—Application has been made by the Cleburne Ry. to build an electric railway in Cleburne. The capital stock is $65,000. Lawrence Hewitt is one of the incorporators.

GATESVILLE, TEX.—It is reported that the Temple Northwest Ry. Co. is contemplating constructing an extension from Gatesville to Hico, a distance of about 49 miles. W. E. Dozler, Temple, is Gen. Mgr.

HOLLYWOOD, CAL.—The contract has been awarded to PALMER McBRIDE & QUAYLE, Pacific Electric Bldg., Los Angeles, for building a ten-mile extension of the Los Angeles Pacific electric line from Lankershire to Hollywood and Kester. The amount of the contract was $400,000.

OCEAN PARK, CAL. — The Ocean Park Scenic Ry. Co. has awarded contract to P. D. HOUSE for the construction of a scenic railroad at the foot of Marine St. The amount of the contract was $50,000.

LOS ANGELES, CAL.—The Board of Supervisors will receive bids until 2 p. m., Jan. 23, for an electric railway franchise to be constructed on portions of highways in Section 3, Township 1, south, range 14 west, and in east 12,000 acres of south ½ of Rancho Ex Mission. V. D. Keyes is County Clk.

FRESNO, CAL.—The Fresno-Hanford Interurban Electric R. R. will construct a power house for the road, ten miles sotheast of here. The cost will be $100,000. Mr. F. S. Granger is Pres. of the road.

VISALIA, CAL.— C. H. Holley and H. H. Holley are promoting the construction of a line from Poterville and Springfield, and between Tulare and Visalia. The large dam is nearly completed, and work will soon commence on the concrete flume six miles in length, and on track construction.

CORNWALL, ONT.—It is reported that plans are being considered for the constructing of a proposed electric railway between Hawkesbury and Cornwall by P. F. Campbell and Moloney.

LONDON, ONT. — The Imperial Traction Co. proposes to cover western Ontario with a network of electric lines. It will start construction work early in the spring. George M. Reid, London, Ont., is interested.

LIGHT AND POWER PLANTS.

(*Denotes that this work is advertised in Engineering News.)

PENACOOK, N. H.—An extension of its transmission line is contemplated by the Penacook Electric Light Co. The line will extend southward on the River Road from its present terminus at the Galvin Estate to Riverhill, to supply electric service to residents.

WEYMOUTH, MASS.—Application has been made by the Weymouth Light & Power Co. to the Massachusetts Gas and Electric Light Commission for permission to issue $210,000 in capital stock.

BOSTON, MASS.—It is proposed to place ten miles of street now served by electric service from poles on the underground service. Under the present law these must be changed to the conduit system at least two miles of street each year, and poles are gradually being abolished from the centre of the city outwards. Jas. E. Cole is Wire Comr.

WOONSOCKET, R. I.—A contract has been awarded to the FRENCH WORSTED CO., for a 750 K.W. mixed flow Rateau-Smoot turbine and Smoot alternating current, three phase, 60-cycle generator with direct connected exciter.

PROVIDENCE, R. I.—The French Worsted Co. has awarded a contract for a 750-KW. mixed flow Raritan Smoot turbine and Smoot alternating-current, three-phase, 60-cycle generator, with direct-connected exciter. The new installation will increase the power-plant capacity of the French Worsted Co. by 1,075 HP.

NORWICH, CONN.—It is reported that the Board of Gas and Electric Commissioners will install a 750-K.W. steam turbo generator set and make other improvements to the municipal electric light plant, for which an appropriation of $35,000 was made.

NEW YORK, N. Y.—James Knox Taylor, Superv. Archt., Treasury Dept., Washington, has awarded contract for the installation of a heating plant at the New York assay office to FRANK DOBSON CO., New York.

MINETTO, N. Y.—See item under Manufacturing Plants.

ALBANY, N. Y.—The WELLS-BOUGHTON CO., Troy, N. Y., has been awarded the contract for the construction of a hydroelectric plant at the Crescent dam at $42,940.

WATERTOWN, N. Y.—The Deer River Power Co. has been authorized by the Public Service Commission to exercise the franchise granted in the towns of Champion and Denmark.

DUNCANNON, PA.—It is reported that the Duncannon Iron Works Co. is installing an electric plant to provide electric service for lamps and motors for its works.

WILKES-BARRE, PA.—Improvements are being made by the Wilkes-Barre Ry. on its power house on South Main St. A 3-story addition will be built.

WASHINGTON, D. C.—Bids received by the Superv. Arch., Treasury Dept., Washington, D. C., Dec. 28, for wiring and conduit in the U. S. post-office building, Oklahoma City, Okla., are as follows: Fruitticher Electrical Co., Birmingham, Ala., $9,321; Arnold & Wetherbee, Oklahoma City, Okla., $6,223; Herman Andrae Electrical Co., Milwaukee, Wis., $5,475; R. F. Fletcher, Columbus, Ind., $6,800.

WASHINGTON, D. C. — Bids will be received until 2 p. m., Jan. 10, by the Commissioner of the District of Columbia, for the construction of a central heating plant and boiler house at M St. High, Simmons and Douglass schools. Further information may be obtained from the Ch. Clk., Room 427, District Bldg.

The contract has been awarded to the KELLER PIKE CO., Philadelphia, for wiring the State, War and Navy Building, Washington, at item 1, $19,900; item 2, $2,800; item 3, $500.

IVANHOE, VA.—It is reported that a hydroelectric power plant will be erected by the Carter Iron Co., near its furnace property. A report has been made by Lenz & Mole, Engrs., 21 Broadway, New York, N. Y.

LEXINGTON, VA.—The Lexington Light & Power Co. and the Rockbridge Power Corporation have consolidated for the purpose of supplying the city with electrical service.

MORGANTOWN, W. VA.—The Morgantown & Dunkard Valley R. R. Co. is said to be considering plans for the erection of a power-house in Morgantown.

CHARLESTON, S. C. — Bids will be received until 3 p. m., Jan. 13, at the Treasury Dept., Washington, D. C., for a conduit and wiring system and the extension of present gas-piping system at the United States custom house at Charleston. Drawings and specifications may be obtained at this office or at the office of the custodian, Charleston, at the discretion of the Superv. Arch., James Knox Taylor.

AUGUSTA, GA.—The Augusta-Aiken Ry. & Electric Co. will purchase a large quantity of power-house supplies, including turbines, switchboards, motor generators. The purchase will be made through J. C. White Co., New York.

VICKSBURG, MISS.—Bids will be received until Jan. 18 at the United States Engineer Office, Vicksburg, Miss., for steel hull, steel pontoons, self-propelling hydraulic dredge and pipe line, including steel dredge hull, steel pontoons and pipe line, upper works, steam plant, electric plant propelling machinery, pumping engine, sand pump, condenser plant and evaporator, suction pipe and ladder, cutter head, gear and engine, refrigerating plant and winches.

SHREVEPORT, LA.—It is reported that the Texas Oil Co., has under consideration the construction of a million-dollar refinery which will be built on Hart's Island, where the company has already more than $400,000 in more than thirty large storage tanks.

It is reported that the Arkansas Natural Gas Co., which has a franchise to pipe gas from the Caddofield to Little Rock and other cities in the State of Arkansas is contemplating erecting a large gas plant near the town of Vivan in the local field. The proposed plant will cost about $200,000.

CHATTANOOGA, TENN. — The Nola Chuckey Power Corporation, organized to develop water-power in the Chuckey River, at Erwin, will soon commence work on a dam,

750 ft. long and 35 ft. high, with bulkhead 100 ft. long and 9-ft. feeders, each 1,500 ft. long. A waterwheel will be installed to accommodate 13,000 HP. generators. The estimated cost is $500,000.

PARKSVILLE, TENN.—The Eastern Tennessee Power Co. has awarded the contract for electrical equipment for its power plant to the WESTINGHOUSE ELECTRIC & MFG. CO., Pittsburg, Pa. M. S. Hopkins is Vice-Pres.

MANCHESTER, TENN.—It is reported that the citizens of this place contemplate issuing bonds to the amount of $25,000 for the construction of a water-works and electric light plant. E. P. Vaughn is Mayor.

OWENSBORO, KY.—The following bids were received on Dec. 27 by the Superv. Arch., Washington, D. C., for an elevator in the U. S. Public Building: Llewellyn Iron Works, Los Angeles, Cal, $7,800; Otis Elevator Co., New York City, $5,274.

AKRON, OHIO.—Work will soon commence on the new power-house of the Northern Ohio Traction & Light Co. Surveys are now being made by the Cleveland Const. Co., with the purpose of preparing plans. Charles Currie, Akron, is Gen. Mgr.

JACKSON, OHIO.—The Board of Public Affairs has awarded the contract for the new light plant as follows: electrical equipment including generators, lamps, switch-board, to the FT. WAYNE ELECTRICAL CO., Ft. Wayne, Ind., at $8,814; engine to the BALL ENGINE CO.; heater and pumps to the SCIOTO VALLEY SUPPLY CO., Columbus.

KENTON, OHIO.—An ordinance has been introduced in the City Council providing for an extension of 25 years be given the franchise of the Kenton Gas and Electric Co., which does not expire for some time. It was explained that the companies desired an extension of the franchise that it can make extensive betterments on its plant.

INDIANAPOLIS, IND.—The Indiana Power Co., Indianapolis, Ind., has incorporated to build several power plants in the cities in the coal fields of Southern Indiana. Thos. Stillwell, Fred. E. Matson and E. E. Gates are directors.

EAST ST. LOUIS, ILL.—The East St. Louis & Suburban Ry. plans to construct a power house to supplant the storage battery station on Harrison St. and West St., Belleville. The estimated cost is about $20,000. C. M. Clark, 321 Chestnut St., Philadelphia, Pa., is Pres.

*CHICAGO, ILL.—See item under Water Supply-Irrigation.

MENASHA, WIS.—It is reported that the Lakeside Paper Co. is contemplating the erection of a paper mill, including a steam and power plant. F. J. Lachman, Neenah, Wis., is interested.

BAYFIELD, WIS.—Plans have been completed by the Board of Water and Light Commissioners for the construction of a new boiler house for the municipal water and light plant. The estimated cost is $8,000.

MELLEN, WIS.—The Ashland Lighting Co., is said to be contemplating the construction of a dam on Bad River near Mellore.

CLEAR LAKE, IOWA.—It is reported that the Town Council has authorized the installation of ornamental lamps on five blocks at $65 per lamp standard.

KEOKUK, IOWA.—A large dam is being constructed by the Mississippi River Power Co. on the Mississippi River at Keokuk. Stone & Webster Engineering Corporation, Boston, Mass., has charge of the work.

SHAKOPEE, MINN.—Bids will be received until Jan. 10 by the City Clerk, it is stated for an engine driven pump, for the electric light plant.

HAMBURG, IOWA.—The citizens of this place voted on Dec. 12 to grant to E. B. Hillman, Peoria, Ill., a franchise for the construction of an electric light plant.

LINN CREEK, MO.—Survey will soon be started by the Big Niangua Hydro-Electric Co. for the proposed hydro-electric power plant. A dam will also be constructed, to cost about $900,000. About 22,000 HP. will be developed. Roland E. Brunner, Kansas City, Mo., is interested in the project. The estimated cost of the plant is $2,000,000.

MOBERLY, MO.—It is reported that plans are being considered for an addition to the water-works system and the erection of an electric light and water-works system plant in Moberly. L. G. Knapp & Co., Kansas City, Mo., are Engrs.

WARSAW, MO.—It is reported that S. O. Norris, of the Continental Power & Development Co., Clinton, Mo., purchased the Arnolds mill property and will supply electrical service to Warsaw.

MURFREESBORO, ARK.—Plans are being prepared by W. A. Fuller, 1616 Chemical Bldg., St. Louis, Mo., for the power plant to be erected in Pike County Water Co. The estimated cost is about $850,000.

FORT STOCKTON, TEX.—THE CLAY BROS., San Angelo, Tex., have been granted a franchise for the construction and operation of an electric light plant.

LAREDO, TEX.—Erasmo Martinez and Jose Maria Ramos, capitalists of Nuevo Laredo, Mex., have been granted a franchise by the Mexican government for the bringing in natural gas by means of a pipe line under the Rio Grande to Nuevo Laredo. In connection with the granting of the concession, negotiations are under way with Saltillo capitalists for the establishment of a large smelter in Nuevo Laredo.

REISER, TEX.—Natural gas will be piped into Mexico from the Reiser field near here. The Mexican government has granted a concession to Jose Maria Ramos and Erasmo Martinez of Neuevo Laredo, Mexico, to lay pipe lines for gas and construct distributing systems in the State of Tamaulipas. This concession is said to be part of a plant to erect a smelter at Nuevo Laredo. The project of piping the gas to Monterey, in the State of Nuevo Leon, 150 miles south of Laredo, is also under consideration. The Border Gas Co., recently finished laying a gas pipe line from its wells at Reiser to Laredo, and it is proposed by Messrs. Ramos and Martinez to obtain their supply of gas from this company.

WICHITA FALLS, TEX.—Another gas main will be laid from the Petrolia gas field in Clay County to this place by the North Texas Gas Co.

CRYSTAL CITY, TEX.—See item under Manufacturing Plants.

OKLAHOMA CITY, OKLA.—Plans have been adopted by the Oklahoma Ry. Co., for an expenditure of $200,000 in doubling the capacity of its electric power plant.

STILLWELL, OKLA.—The contract has been awarded by the city to the SOUTHWESTERN ENGINEERING CO., Oklahoma City, Okla., for the construction of an electric light plant. Work will be started about Jan. 7.

GUTHRIE, OKLA.—A. A. Leer, Cy. Clk., will receive bids until Jan. 5 for improvements to municipal filtration plant. There will be required one pressure blower direct-connected to electric motor to be equipped with starting box, pressure blower to supply 900 cu. ft. of free air at a pressure of 5 lbs. per sq. in., and one single-stage centrifugal pump direct-connected to electric motor, both to be installed with necessary valves, fitting connections, switching, starting boxes, wiring and foundation.

POCATELLO, IDAHO.—J. A. Jones is reported to have secured financial backing for the construction of a large gas plant, at an estimated cost of $200,000.

FALLON, NEV.—It is reported that the City Council is considering plans for the installation of an electric generating plant in connection with the water and sewer systems.

GARDNERVILLE, NEV.—Preparations are being made by William Hansberg for the installation of an electric plant on the Duncan Ranch; 5,000 ft. of pipe line will be required.

COLVILLE, WASH.—Louis P. Larson has been granted a franchise by the County Comrs. to construct and operate a water-works and electric light system in Metaline Falls.

RICHLAND, WASH.—The Lower Yakima Irrigation Co. is negotiating with the Pacific Light & Power Co. for the construction of a transmission line to connect with the high-tension line of the Pacific Co., to furnish electricity for the pumping station of the Lower Yakima Irrigation Co.

BUCKLEY, WASH.—It is reported that construction work has been started by Stone & Webster, Engr. Corp. on the erection of a power plant on the White River.

GRANGER, WASH.—Arrangements have been completed by the Pacific Power & Light Co. for the construction of an electric line from Granger to Sunnyside. A. S. Grenier, Portland, Ore., is Gen. Mgr.

NORTH YAKIMA, WASH.—It is stated that the Northwest Light & Water Co., will spend during ensuing year $2,000,000 in various improvements in the valleys of Yakima. A high tension power line will be constructed from the Naches generating plant and the Rockland District.

GRANTS PASS, ORE.—Arrangements are being made to improve the Golden Drift dam irrigation project which will involve an expenditure of about $40,000.

SAN FRANCISCO, CAL.—Parker O. Wright, Jr., Arch., Security Bldg., has awarded contract to the FOULKES-GAYLORD CO., Henne Bldg., for installing the electrical work in a brick store and office being erected on Main St., near Fifth, for J. C. Donovan.

LOS ANGELES, CAL.—The Los Angeles Gas & Electric Corporation has awarded contract to R. D. WOOD & CO., of Philadelphia, Pa., for furnishing all labor and material for the erection of a 5-lift gas-holder of 6,001,000 cu. ft. capacity, guide frame, wooden crown support, steel tank, inlet and outlet pipes, etc., on Center St., between Ducommun and Commercial Sts. Amount, $304,000.

LONG BEACH, CAL.—F. A. BARNES, Long Beach, has been awarded sub-contract for the copper and cornice work on the Southern California Edison Co.'s plant (gas) on the inner harbor. Amount, $10,000. The work requires 27,000 lbs. of copper.

SANTA BARBARA, CAL.—The Santa Barbara Gas & Electric Co. will erect three new buildings in connection with its plants in this city. One will be built at Castillo St., at a cost of $8,000, and one on Montecito St., and the other on Quarantiana St.

GREENVILLE, CAL.—According to reports, the Indian Valley Light & Power Co. is about to make a number of extensions soon. Taylorsville, Crescent and Seneca will be benefited by the improvements.

VENTURA, CAL.—The County Bd. of Supervs. of Ventura County have granted to the Ventura Power Co. a franchise to lay and maintain a 36-in. diameter reinforced concrete pipe line.

TIBURON, CAL.—The Chief of the Bureau of Yards and Docks, Washington, D. C., has awarded contract for the construction of a power plant extension at Tiburon, Cal., to the SNARE & TRIEST CO., 143 Liberty St., New York, at $23,000.

HAMILTON, ONT.—Officials of the Dominion Power Transmission Co., announce that during the present year, $350,000 will be spent in making extensions and improvements to the plant here.

BOWMANVILLE, ONT.—The Seymour Power & Electric Co., Ltd., has been granted a franchise in this place.

REGINA, SASK.—It is reported that bids will be received until Jan. 17 by A. J. McPherson, City Comr., for furnishing the following: 1,500 K.W. steam turbine generating unit; 500-K.W. generating unit; 500-HP. boiler, hand-power traveling crane economizer and a coal and ash conveyor. E. W. Bull is City Electrician.

BRIDGES.

*(*Denotes that this work is advertised in Engineering News.)*

MANCHESTER, MASS.—The Boston & Maine R. R. Co. has filed plans with the Harbor and Land Commissioners for the reconstruction of the drawbridge here. J. P. Snow is Ch. Engr., Boston, Mass.

BOURNE, MASS.—Plans have been filed with the Harbor and Land Commissioners by the Old Colony R. R. Co. for the construction of a new bridge at Cohasset Narrows.

PROVIDENCE, R. I.—The Board of Contract and Supply has awarded a contract for lumber for bridge work to WILLIAM M. HARRIS & CO., at $27.20 per M. ft. James A. Potter & Co. bid $31 per M. ft. A contract for bridge piles has been awarded to H. E. WEST, Seekonk, at 15½ cts. per ft. Other bidders were: C. A. Card, Groton, Conn., 20 cts. per ft.; John McLaughlin, Cumberland, $6.50 each, and Alfred F. Morse, Boston, $5.75 each.

NEW YORK, N. Y.—All bids opened by Kingsley L. Martin, Comr. of Bridges, on Nov. 25, for constructing the elevators, stairs, drainage, ornamental and electrical work for the anchor piers of the Queensboro Bridge over the East River, between the Boro. of Manhattan and Queens, have been rejected. New bids are asked until Jan. 10. Noted on Dec. 29.

WHITEHALL, N. Y.—A bridge, it is reported, will be constructed here over South Bay, Lake Champlain. Estimated cost, $75,000.

CHAUMONT, N. Y.—Bids have been received as follows for constructing the substructure and fender cribs for a lift bridge over the Chaumont River here: C. D. Dodge & Co., Watertown, $13,065; Adams & Duford Co., Chaumont, $5,882; JOHN M. FITZGERALD, Sackets Harbor, $5,260 (awarded contract).

WHITE PLAINS, N. Y.—The Westchester County Board of Supervisors have voted to rebuild two bridges between Yonkers, N. Y., and East Chester, N. Y., the cost, not to exceed $10,000 each.

JERSEY CITY, N. J.—The Boulevard Commissioners of Hudson County will reconstruct the Boulevard Bridge over the Pennsylvania R. R. tracks. Estimated cost, $15,000. A new bridge will also be built over the New Jersey Central R. R. tracks at West Eighth St., Bayonne.

BLOOMFIELD, N. J.—The Board of County Freeholders of Essex County has instructed the County Engineer, Newark, N. J., to prepare plans for the construction of a bridge at Baldwin St., Bloomfield. Estimated cost, $7,000.

NEW BRUNSWICK, N. J.—Fred F. Simons, County Engr., New Brunswick, has prepared plans and estimates for the construction of a 60-ft. lift bridge across Cheesquake Creek.

READING, PA.—The Berks County Commissioners are planning to construct a new bridge over the Schuylkill River, at the foot of Penn St., 1,400 ft. long, of reinforced concrete construction.

PHILADELPHIA, PA.—The city has appropriated $25,000 for bridge repairs. George R. Stearns is Comr. Pub. Wks.

HAGERSTOWN, MD.—The Hagerstown & Clearspring Ry. Co., I. N. Downs, Mgr., Hagerstown, will construct a bridge, it is reported, across Conococheague Creek.

TOWSON, MD.—The contract for the construction of the Black River bridge on Eastern Ave., Baltimore County, has been awarded to ANDREW MILLER & CO., Dundalk, Sparrows Point post-office, Md., by H. G. Shirley, County Roads Engr., Towson, at $34,923. The other bids follow: McLean Contracting Co., Baltimore, $59,365; B. F. Sweeten & Son, Baltimore, $54,800; Sanford & Brooks Co., $49,561; Frobee & Carozza, $45,271; Raymond Concrete Pile Co., $46,580.

KENOVA, W. VA.—The Norfolk & Western Ry. Co. is planning to construct a new bridge across the Ohio River here.

WHEELING, W. VA.—The Pennsylvania R. R. Co. will renew the present steel structures over Wheeling Creek with 2-deck plate-girder spans, each 80 ft. long, on masonry abutments and piers; 10,000 ft. of piling, 3,000 yds. of excavation and 4,000 yds. of masonry will be required. Bids will be asked after final plans have been approved. W. C. Cushing is Ch. Engr. M. of W., Pittsburg, Pa.

ST. MARYS, W. VA.—The Baltimore & Ohio R. R. Co., A. W. Thompson, Ch. Engr., Baltimore, Md., has awarded the contract to the YOUNGSTOWN CONSTRUCTION CO., Youngstown, Ohio, for the construction of the bridge across French Creek, to replace the present structure. The AMERICAN BRIDGE CO., 30 Church St., New York, has secured the contract for the steel work.

BERKELEY SPRINGS, W. VA.—The Morgan County Commissioners have awarded the contract to the OWEGO BRIDGE CO. for the construction of a new steel bridge across Sleepy Creek, at Highland Mills, at $5,000.

*BEAUFORT, N. C.—Bids were received by Capt. Earl I. Brown, Corps Engrs., U. S. A., Wilmington, N. C., on Dec. 21 for constructing fender piers for highway bridges over Core Creek near Beaufort. The contract has been awarded to BLALOCK & HARTSFIELD, Newbern, N. C., at $3,190.

CHARLESTON, S. C.—The Atlantic Coast Line Ry. Co. is considering the construction of a viaduct over Magnolia crossing. Estimated cost, $350,000.

CEDARTOWN, GA.—The County Commissioners have awarded contracts for the construction of two steel bridges, one over Cedar Creek, at Young's Station, the other at the Brumley ford, to J. W. HONSEAL.

MONTGOMERY, ALA.—A steel bridge will be constructed over the Central of Georgia R. R. tracks at Hopper, Chandler and Houston St.

NEWPORT, KY.—The Louisville & Nashville R. R. Co. and the Chesapeake & Ohio Ry. Co. have agreed on plans in connection with the construction of a viaduct at Monmouth St. W. H. Courtenay is [illegible] Engr., Louisville & Nashville R. R. Co., [illegible]ville, Ky.

JEFFERSON, OHIO.—Bids will [illegible] received by the Board of Commissioners of [illegible] Ashtabula County, Jefferson, until 1 p. m. [illegible] 16, for furnishing all the material a[illegible]ting the superstructure of a riveted [illegible] Pratt truss bridge over Grand River, on [illegible] East and West Center Road, in Orwell [illegible]hip, per Report No. 154, in accordance [illegible] the form of contract, plans and sp[illegible]ions furnished by J. S. Matson, Coun[illegible]

YOUNGSTOWN, OHIO.—The [illegible] of County Commissioners has award[illegible] contract for the construction of the [illegible] Run bridge, in Youngstown Townsh[illegible] the HUNTER CONSTRUCTION CO[illegible]ngstown, at $13,420, for a bridge [illegible] steel joists.

GALION, OHIO.—Bids will be re[illegible] by the Board of Commissioners of [illegible]ford County, G. F. Ackerman, County A[illegible] until noon, Jan. 7, for the construction [illegible] concrete covering, culvert or arch ov[illegible]ckle Run, for a distance of about 274 ft.

WELLS, MICH.—The Board of D[illegible]unty Road Commissioners, Escanaba, [illegible] has awarded the contract for the const[illegible]n of a concrete bridge over the Escan[illegible] River here to the DELTA CONTRACTIN[illegible] at $39,200. Other bidders were: Illin[illegible] Bridge Co., Chicago, Ill., for 32-ft. brid[illegible]hout walks, $47,900; Wynkoop-McGorm[illegible] Co., Toledo, Ohio, $75,600 and $67,200.

ROCK ISLAND, ILL.—The Bri[illegible] Committee of the City Council has aw[illegible] the contract for the construction of t[illegible] Melan bridge over the Rock Island Riv[illegible] the CLINTON BRIDGE CO., Clinton, I[illegible] List of bidders noted on Dec. 15.

CRETE, ILL.—Bids will be re[illegible] by Sam Rose, Town Clk., until 2 p. m. [illegible] 9, for the construction of a reinforced [illegible]crete bridge in Crete Township. Plans a[illegible] specifications can be seen at the offi[illegible] the Town Clerk or may be obtained [illegible] the State Highway Commission, Sprin[illegible], Ill.

*PEORIA, ILL.—The date for [illegible]ving bids for the construction of a brid[illegible] across the Illinois River at Bridge St. [illegible] been extended until 8 p. m., Jan. 24. [illegible] were to have been received on Dec. 30 [illegible] George F. Simmons is Comr. Pub. Wks.

ELGIN, ILL.—Carl E. Plum, City Engr., has prepared plans for the construc[illegible] of a concrete bridge to replace the stru[illegible] destroyed by fire at Willard Ave.

FOND DU LAC, WIS.—A. H. Pit[illegible] Asst. City Engr., is preparing plans for the construction of a reinforced-concrete bridge across De Nevue Creek, at Scott St.

GRUNDY CENTER, IOWA.—Bids will be received by E. G. Ensminger, County Audr., Grundy County, until noon, Jan. 6, for bridge work for the year 1911, as follows: Construction and repair work of all wooden and steel bridges; concrete floors and abutments for steel bridges, and construction of concrete bridges and culverts complete.

DENISON, IOWA.—The contract has been awarded to LANA & CO., Harlan, Iowa, for constructing bridges in Crawford County for one year.

RED JACKET, MINN.—The contract has been awarded by the county to the MARSH ENGINEERING CO., Des Moines, Iowa, for the construction of a concrete bridge near here at $12,650. Ed. Weaver is County Audr., Mankato, Minn.

DAVID CITY, NEB.—The Board of County Supervisors has awarded the contract for bridge construction for the year 1911-1912 as follows: Wooden bridges, to the NEBRASKA CONSTRUCTION CO., Lincoln, Neb.; cement culverts, to the WILSON REINFORCED CONCRETE CO., Nebraska City, Neb.; metal culverts, to the NEBRASKA CULVERT MFG. CO., Wahoo, Neb.

HASTINGS, NEB.—The Adams County Supervisors on Dec. 21, awarded the county bridge contract for 1911 to the STANDARD BRIDGE CO., Omaha, Neb.

KEARNEY, NEB.—Bids will be received by the County Board of Supervisors, Kearney, until Jan. 12, for new bridge work, repairs, and bridge lumber.

BIGTIMBER, MONT.—The Commissioners of Sweetgrass County have awarded contracts to the SECURITY BRIDGE CO. for constructing bridges over the Yellowstone River at Reed Point and Grey Cliff, at $19,800 and $14,750, respectively.

DALLAS, TEX.—Bids were received as follows on Dec. 20 by the Commissioners' Court for the construction of the Wilmer, Hutchins and Malloy drawbridges across the Trinity River: (a) center bearing; (b) rim bearing; Penn Bridge Co., Beaver Falls, Pa., (a) $48,500, (b) $48,000; Austin Bros., (a) $50,866, (b) $54,199; El Paso Bridge & Iron Co., (a) $45,750, (b) $46,400; Midland Bridge Co., (a) $60,000, (b) $60,000; Milwaukee Bridge Co., (a) $46,799, (b) $47,295; Missouri Valley Bridge & Iron Co., (a) $40,380, (b) $41,780; F. H. Alsbury, (a) $50,840, (b) $50,840; Virginia Co., (a) $57,709, (b) $59,615; Chicago Bridge & Iron Co., $65,800, (b) $67,460; Kansas City Bridge Co., (a) $51,[illegible]67, (b) $52,118.

CUERO, TEX.—The San Antonio & Arkansas Pass Ry. Co., will erect a steel bridge across the Guadalupe River. Estimated cost, $236,000. W. H. MacIntyre is Pres., San Antonio.

SPOKANE, WASH.—Plans for the construction of a steel bridge over the Spokane River at Nettleton St., are being prepared by Morton Macartney, City Engr. Estimated cost, $285,000.

Plans are being prepared for the construction of a steel trestle 320 ft. long by A. R. Scott, County Engr.

PORTLAND, ORE.—J. W. Morris, [illegible]y Engr., is preparing preliminary plans [illegible]r the bridge across the Willamette River, [illegible]n Ellsworth to Meade Sts. The bridge is [illegible] be approximately 4,000 ft. long, with e[illegible]n spans. The draw span will be 250 ft. in length and be similar to that of the Hawthorne bridge. The deck of the bridge will be 60 ft. wide, and the car tracks will be

in the middle of the span instead of suspended on trusses, with a roadway in the center as on the Hawthorne bridge.

LEBANON, ORE.—The Council has ordered the construction of a new bridge over the canal on Bridge Ave., near Williams St.

MODESTO, CAL.—The Board of Supervisors of Stanislaus County, Modesto, Cal., has awarded the contract for the construction of two bridges to W. L. GILLHAM & SON, San Jose. The first structure is over Dry Creek [illegible] Gomes ranch, the bids for which [illegible] W. L. Gillham & Son, $6,633; West[illegible] & Construction Co., $8,571; Oak[illegible] Bridge Co., $9,720; Pacific Construction [illegible] $8,229; Clark & Henery Construction [illegible] $9,960. The second structure is to be erected across McDonald Creek, about one mile south of Le Grange. The bids [illegible] W. L. Gillham & Son, $9,891; West[illegible] & Construction Co., $9,963; Oak[illegible] Bridge Co., $10,100; Pacific Construction [illegible] $9,673; Clark & Henery Construction [illegible] $9,673; T. K. Beard, $9,120.

BERKELEY, CAL.—The Council has awarded a contract to the EASTERLY CONSTRUCTION [illegible] to erect a culvert over Codornises Creek [illegible] cost $6,630. The only other bid submitted was that of the Contra Costa Construction Co., at $9,990.

LOS ANGELES, CAL.—Plans have been filed [illegible] the Southern Pacific Ry. and the Pacific Electrical R. R. Co., at Los Angeles, for a drawbridge to be built over the channel between the turning basin and the west basin [illegible] San Pedro Harbor. The bridge is to be [illegible] the direct-lifting type, with 180 ft. clear spans.

PASADENA, CAL.—Long & Cary, Agts. for Arroyo Park Tract, at Linda Vista Way, have accepted the plans of Williams & Nishkian, Chamber of Commerce Bldg., Pasadena, for a [illegible]0-ft. concrete bridge spanning Arroyo Seco, from Prospect Sq. to Arroyo St. Bids will be asked. Noted on Dec. 22.

CALGARY, ALTA.—Bids for two steel bridges to be erected by the city have been rejected. New bids will be asked shortly.

BUILDINGS.

(*Denotes that this work is advertised in *Engineering News*.)

BOSTON, MASS.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has rejected all bids on the building for the Appraisers' Stores, Boston, Mass., as being in excess of the appropriation. Bids were received on Dec. 22 and noted on Dec. 29.

PITTSFIELD, MASS.—We are officially advised that the following contracts have been awarded for the construction of a 2-story school building, bids for which were received on Dec. 16: General construction, FOOTE & JONES; plumbing, NOLAN & HERBERT; heating and ventilating, ROBBINS & GAMEWELL CO.; painting, HENINGTON & TROY. The structure will be partly fireproof, of brick and limestone, 117 × 72 ft. McLaughlin & Seibert are the Archs. The estimated cost of the school is $71,000, and equipment, $4,000.

WORCESTER, MASS.—A 3-story brick structure is contemplated at the corner of Shrewsbury and Hill Sts., to be built in the spring by Hyman J. Rome, 40 North Main St., Gardner. Estimated cost, $40,000.

FAIRHAVEN, CONN.—The Board of Education plans to construct a school building at Clinton and Dailey Aves. Bids will soon be received. Estimated cost, $80,000.

NEW YORK, N. Y.—We are officially advised that the contract to erect a 24-story hotel on the block bounded by Broadway, Sixth Ave., 33d and 34th Sts., to be known as the Greeley Square Hotel, has been awarded to the THOMPSON-STARRETT CO., 49 Wall St. The plans will be prepared by F. M. Andrews, Arch., 1 Madison Ave. The estimated cost of the building is $5,000,000. The entire project will represent an expenditure of about $13,500,000. The work of demolishing the buildings has been started.

The general contract for constructing a 4-story and basement garage for the Roman Catholic Church of Corpus Christi, 505 West 121st St., has been awarded to the UNITED FIREPROOFING CO., 1123 Broadway. The OTIS ELEVATOR CO., 17 Battery Pl., has the elevator contract. It will be of reinforced concrete and brick, 100 × 90 ft. L. P. Fluhrer, 1123 Broadway, is the Arch. When completed the structure will be leased by Carlos P. Duque. Estimated cost, $85,000.

NEW YORK, N. Y.—Bids will be received until Jan. 12, by V. Hugo Koehler, Arch., 489 Fifth Ave., for the construction of a 12-story store building, with a basement and cellar for Harry Fischel. It will be a fireproof structure, 50 × 200 ft., of brick, steel, terra cotta and stone.

Plans have been prepared by H. P. Knowles, Arch., 1170 Broadway, for the construction of a 20-story building to replace the old Masonic Temple at 23d St. and Sixth Ave. It will be of brick and concrete. The contract will be awarded in a few days. Estimated cost, $1,100,000.

NEW YORK, N. Y.—Plans have been filed for making over and entirely remodeling the interior of the 10-story salesroom and factory on the north side of 48th St., from Broadway to Seventh Ave., known as the Studebaker Building, for occupancy as a hotel. The entire front and side walls are to be stuccoed in ornamental design, with balconies at different stories and a pergola on the roof, for use as a roof garden. The property is owned by A. D. Juilliard, who a few months ago leased the building to Bustanoby Bros. Trowbridge & Livingston, 527 Fifth Ave., Archs., have estimated the cost of this improvement at $100,000.

Bids will be received about Feb. 1, we are officially advised, by the Princeton Construction Co., 220 Broadway, for the construction of a [illegible]-story apartment house, 204.4 × 60 ft., on the west side of Madison Ave., between 82d and 83d Sts. Schwartz & Gross, 347 Fifth Ave., are the Archs. It will be of brick, steel, stone and concrete. Estimated cost, [illegible]00,000.

Bids will soon be received for the erection of an 8-story and basement loft building, 56.3 × 95 ft., on the south side of 33d St., near Ninth Ave. John Wooley, 100 Fifth Ave., is the Arch., and the 416 West 33d St. Realty Co., 160 Broadway, the owner. It will be a fireproof structure, of steel and brick. Cost, $100,000.

*WINGDALE, N. Y.—We are officially advised that the contract to erect a prison here has been awarded to the P. J. CARLIN CONSTRUCTION CO., 16 East 23d St., New York, at $2,984,000 for the entire work, and $698,000 for deductions as provided in the specifications, which eliminated a group of buildings, including the warden's house, chapel, recreation building, south industrial shop, storehouse and condemned and punishment cells. The company agrees to complete the contract by Aug. 30, 1913. Noted last week. Bids were received on Dec. 15.

BUFFALO, N. Y.—The Ellicott Club, H. E. Crouch, Pres., Fidelity Bldg., is arranging for the erection of a Club House, with gymnasium and baths, in the central business district and is inviting competitive plans from architects.

Esenwein & Johnson, Archs., Ellicott Sq. Bldg., have completed plans and are receiving bids for the first group of new buildings for the Buffalo Orphan Asylum, at Elmwood Ave. and Scajaquada Boulevard. There will be an administration building, boys, girls and infants wards and power house; 2 stories and basement of steel, stone and brick construction, fireproof. Estimated cost, $200,000.

BUFFALO, N. Y.—Colson & Hudson, Archs. Dun Bldg., have plans in preparation for a 3-story and basement store and office building, 62½ × 100 ft., of brick, steel and terra cotta, to be erected at 735 Main St. by Allen E. Klopp, Erie County Bank Bldg. Estimated cost, $50,000.

Francis G. Ward, Comr. of Pub. Wks., Municipal Bldg., is having plans and specifications prepared for the erection of a 12-room addition to Public School No. 3, at Perry and Mississippi Sts. It will be of brick and stone construction.

Howard L. Beck, City Arch., Municipal Bldg., is preparing plans for Public School No. 32, to be erected at Clinton, Cedar and East Bennett Sts. It will contain 32 rooms with gymnasium and swimming pool and will be of stone, brick and steel construction, fireproof. Estimated cost, $160,000.

Esenwein & Johnson, Archs., Ellicott Square Bldg., are preparing revised plans for a 14-story office building to be erected at Genesee, Washington and East Huron Sts., by the Buffalo General Electric Co., next Spring. It will have a steel frame and will be of brick and terra-cotta construction. Estimated cost, $500,000. Charles R. Huntley, Fidelity Bldg., is Pres.

The New York Telephone Co., is having plans prepared for a 9-story office building, of steel frame construction, to be erected at West Seneca, Pearl and John Sts., at an approximate cost of $600,000. Henry M. Watson, 14 West Seneca St., is Pres.

GENEVA, N. Y.—Lloyd P. Adams, Arch., has completed plans and is receiving bids for a telephone exchange building on Castle St., 35 × 68 ft., two stories and basement, for the Federal Telephone Co.

ITHACA, N. Y.—The general contract to erect a fraternity house on Cornell Heights for the Sigma Nu Fraternity of Cornell University, has been awarded to DRISCOLL BROS. Leon Stern, Chamber of Commerce Bldg., is the Arch.

SYRACUSE N. Y.—Russell & King, Archs., are completing plans and will receive bids in about two weeks for a church, 112 × 144 ft., with a steel frame of stone and brick construction, to be erected on Midland Ave., by the St. Anthony de Padua Congregation. Rev. Francis Quinn, is Pastor. Estimated cost, $100,000.

ATLANTIC CITY, N. J.—Bids will be received about Jan. 23 by Seymour and Paul A. Davis, Archs., 1600 Chestnut St., Philadelphia, Pa., for the construction of a bank building at Atlantic City, for the Atlantic Safe Deposit & Trust Co. It will be 50 × 100 ft., and fireproof.

ELIZABETH, N. J.—We are officially advised that the contract to erect the proposed armory for the Second Battalion, Second Regiment, N. G., N. J., has been awarded by the State Armory Board, Trenton, to FRED. KILGUS, 13 South Sixth St., Newark. It will be erected at Magnolia Ave. and Walnut St. Cost, $112,000.

*NEWARK, N. J.—Plans are being prepared by William H. McElfatrick, Arch., 1402 Broadway, New York, for the construction of a theater at Broad and Fulton Sts. for the Fulton Theater Co., and the contract will be awarded in a few weeks. It is to be named in memory of Sam S. Shubert, and has been leased for 20 years by his brother, Lee Shubert and others. The cost, including the property, will be about $500,000. Herman C. Sneider, 514 South 14th St., is Pres.

HAZLETON, PA.—Ballinger & Perrot, Archs., 1211 Arch St., Philadelphia, have awarded a contract to H. L. CAMPBELL, of Philadelphia, for a 3-story high school building, for the St. Gabriel's Roman Catholic Church of Hazelton. It will be 62 × 125 ft. Bids were received on Dec. 16. Noted on Dec. 8.

PHILADELPHIA, PA.—The Allegheny Improvement Co., will erect 31 2-story houses on Somerset St., between 28th and 29th Sts., at a cost of $100,000.

BALTIMORE, MD.—I. Silverstein, Calvert Bldg., it is stated, will open a new development at Forest Park Highlands, otherwise known as Forest Park Gardens, by constructing macadam streets, sewer and water systems, concrete walks, and twelve houses, at a cost of $72,000. The total cost of the improvements will be $100,000.

Official advices to the effect that the contract for constructing a produce freight house at Lee, Howard, Hill and Sharp Sts. has been awarded to EDWARD BRADY & SON, 1109 Cathedral St., Baltimore, has been received by us. The Baltimore & Ohio R. R. Co. is the owner. M. A. Long, the company's Arch., prepared the plans.

BALTIMORE, MD.—Plans are being prepared by CHARLES J. JONES, 510 West Saratoga St., for the erection of a manual training school on Park Heights Ave., for the Board of Baltimore County Commissioners. It will be of brick construction, with marble and stone trimmings. Mr. Jones will also construct the building. Cost $40,000.

BALTIMORE, MD.—The Morning Star Council No. 10, Junior Order United American Mechanics, 1204 West Baltimore St., is having plans prepared by William White for a lodge building, three stories high, of ornamental granite, brick and stone, with hardwood and tile trimmings; ornamental ceilings, steam heat, electric lights, etc. Cost, $50,000.

Bids will be received at once by E. H. Gledden and C. N. Friz, Arch., Glenn Bldg., for the construction of an apartment house on the southwest corner of University Parkway and Wyman Park, by the Wentworth Apartment House Co., of which J. G. Vallent is Pres. It will be a non-fireproof structure, of brick and terra cotta, five stories high and 80 × 170 ft. Cost, $100,000.

Isaac E. Emerson, has purchased the building at 122 East Baltimore St. and will raze it to make room for 15-story addition to Hotel Emerson, adjoining at Baltimore and Calvert Sts. Joseph Evans Sperry, Calvert Bldg., is the Arch. and W. H. PARKER, 310 Lombard St., the builder. The new addition is to be build on a concrete foundation, steel frame, fireproof court and of same style of architecture as the present building. The improvement will cost about $225,000.

We are officially advised that the contract to erect an office building for the Maryland Casualty Co., Baltimore and North Sts., 14 stories high, five of which will be the main building and the remaining stories, a tower, has been awarded to JOHN WATERS, 23 East Centre St. It will be a fireproof structure, 60 × 208 ft., of stone, brick, terra cotta and steel. Otto G. Simonson, American Bldg., is the Arch. Cost, $400,000.

OWINGS MILLS, MD.—Bids will be received until noon, Feb. 1, by Frank W. Keating, Supt. Maryland Asylum and Training School for the Feeble Minded, for the erection of a dining room and dormitory building, double dormitory and day room building and a manual training and assembly building.

ROANOKE, VA.—William C. Noland, Arch., Chamber of Commerce Bldg., Richmond, has been commissioned by the National Exchange Bank, as Consulting Architect, to prepare plans for a bank building, 50 × 100 ft. It will be a fireproof structure, and will cost $125,000.

WHEELING, W. VA.—Plans are being prepared by Edward B. Franzheim, Arch., and bids will be received about April 1, for the construction of a 7-story apartment house, 82 × 100 ft. Estimated cost, $90,000.

GAINESVILLE, FLA.—Bids will be received by F. P. Fleming, of Jacksonville, until noon, Jan. 7, for the erection of an engineering building at Gainesville. William A. Edwards, Arch., Candler Bldg., Atlanta, Ga., prepared the plans. P. K. Yonge is Chn. of the State Board of Control.

JACKSON, MISS.—Plans have been submitted to J. J. Coman, Secy. of the State Charity Hospital, from several architects, for the construction of a State hospital, and they have been forwarded to Theodore C. Link, Advisory Arch., Carleton Bldg., St. Louis, Mo., for approval. Estimated cost, $70,000.

MEMPHIS, TENN.—The contract to erect the Falls building, on Front St., between Madison and Court Aves., has been awarded to the SOUTHERN FERRO-CONCRETE CO. John Gaisford, Randolph Bldg., is the Arch. It will be ten stories high, of reinforced-concrete construction, with a brick and terra cotta front and fireproof in every particular. It will be so arranged that it may be converted into a mercantile business, and will carry 100 lbs. to the square foot as floor load. The area will be 96.5 × 140 ft. Cost, $175,000.

CLEVELAND, OHIO.—We are officially advised that the contract to excavate and lay the foundation for the proposed city hall has been awarded to the CONNELLY CONSTRUCTION CO., at $70,900. Bids were received on Dec. 21 by Edward A. Roberts, Clk. of the City Hall Comn.

INDIANAPOLIS, IND.—Plans are being prepared for the construction of a 3 or 4-story fireproof brick building at 735-49 Massachusetts Ave. Dr. Thomas O. Gasaway, 1108 Central Ave., is promoting the project. It will be of reinforced-concrete construction, on a plot 104 × 218 ft. Estimated cost, $50,000.

EVANSVILLE, IND.—Bids will be received about Feb. 1, by Harry Woods, for an office building and theatre on the corner of Fourth and Main Sts. Clifford Shopbell, The Rookery, is the Arch.

GREENSBURG, IND.—The American Tobacco Co., has purchased a 4-acre site on which to erect two warehouses. Bids will be received as soon as plans are completed.

INDIANAPOLIS, IND.—Henry C. Brinker, has ordered plans on which he will ask for bids for the construction of a 7-story business building at the corner of Washington St. and Senate Ave. It will be 167½ × 195 ft. and will cost about $100,000.

The Board of Directors of the Indiana Democratic Club has purchased a $60,000 site on which to build a club house. Bids will be received as soon as plans are completed and approved. B. M. Ralston is Chn.

Charles Edgar Bates, Arch., Lenicke Bldg., is drawing plans for a 3-story brick lodge building, at 2520, 2522, 2524 and 2526 West Michigan St., for the Fraternal Order Building Corporation, to be occupied by the Puritan Lodge, Independent Order of Odd Fellows, and other lodges. Bids will be received by the architect and work will commence Mar. 1.

INDIANAPOLIS, IND.—Brinkley, Turner & Crowder, 202-204 South Meridian St., wholesale merchants, have ordered plans on which bids will soon be asked for the erection of a fireproof warehouse. C. H. Crowder, is Pres.

NORTHGROVE, IND.—P. C. Steadman, trustee of Harrison township and the Advisory Board have approved plans for a stone and brick school house at Northgrove. There will be rooms for manual training and domestic science departments. Bids will be received soon. Griffith & Fair, of Ft. Wayne, are the Archs.

ANN ARBOR, MICH.—Zach Rice, Tecumseh Bldg., Detroit, has been commissioned by the Women's League, of the University of Michigan, Ann Arbor, to prepare plans for a 4-story and basement dormitory, with two wings. Estimated cost, $125,000. Three other buildings, of about the same size, will be built later.

DETROIT, MICH.—Donaldson & Meier, Archs., and Ammerman, McColl & Anderson, Engrs., Penobscot Bldg., have let the masonry contract for the proposed bank building for the Peninsular Savings Bank, J. H. Johnson, Pres., 40 Fort St., West, to A. A. ALBRECHT CO., Penobscot Bldg. The general contract will be awarded soon. Cost, $500,000.

JACKSON, MICH.—The Y. W. C. A., of Jackson, Miss Mary Hyndman, Gen. Secy., 120 Lansing Ave., has selected L. H. Field, Jr., Field Bldg., Jackson, to prepare plans for a Y. W. C. A. building, four stories and basement, 60 × 80 ft., strictly fireproof. It will be heated by steam, with direct radiation and a fan system of ventilation. Cost, $50,000.

CADILLAC, MICH.—Perkins & Hamilton, 132 Clark St., Chicago, are receiving estimates on a $75,000 addition to the Cadillac High School for the Board of Education of Cadillac, including a forge foundry and woodworking room, cooking and sewing rooms, class rooms and gymnasium. The owners will take seperate bids on steam heating and fan system, motor driven, for ventilation.

DETROIT, MICH.—Donaldson & Meier, Archs., and Ammerman, McColl & Anderson, Engrs., Penobscot Bldg., have let the following contracts for the 14-story and basement store building for the E. M. Fowler Estate, Penobscot Bldg.: Structural iron work to AMERICAN BRIDGE CO., Beecher Ave. and Michigan Central R. R.; masonry to MAX BARTHOLOMAEI SON & CO., 466 Warren Ave. East; carpentry to HARCUS & CO., 770 Russell St., all of Detroit. The cost of the building is approximately $150,000. Hirsch Bielfield & Kline, of St. Louis, Mo. and Chicago, Ill., have leased the store.

Van Leyen & Schilling, Union Trust Bldg., have let the following contracts for the 5-story and basement warehouse for the Peoples Outfitting Co., 42 Michigan Ave.: masonry to M. BURKHEISER, 660 Ellery St.; carpentry to SCHMIED-SISMAN CO., 391 Beaufait Ave., both of Detroit. Cost, $45,000.

Bids will be received about Jan. 30, by Malcomson & Higginbotham, Archs., Moffat Bldg., for the construction of an addition to the Harper Hospital, of which Dr. F. E. Moulder, is Supt. It will be a fireproof structure, of brick, 150 × 200 ft. Estimated cost, $300,000.

GRAND RAPIDS, MICH.—C. O. Skinner, Manufactures Bldg., is having plans prepared for a 3-story and basement furniture exposition building, to be located at Ionia, Lyon and Division Sts. It will be strictly fireproof. Approximate cost, $75,444.

MT. CLEMENS, MICH.—Bids will be received until 3 p. m., Feb. 6, by James Knox Taylor, Superv. Arch., Washington, D. C., for the construction complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring), of the U. S. post-office at Mt. Clemens.

WAUPACA, WIS.—The Board of Education has approved plans for a high school building, to be erected here. Estimated cost, $50,000.

MINNEAPOLIS, MINN.—A 10 or 12-story building is planned at Second Ave. South and Fifth St., by the S. T. McKnight Co., on a plot 132 × 152 ft. The company will put in a heavy foundation, and spend between $200,000 and $250,000 on the construction of three stories, which are to be ready for occupancy by Sept. 1, 1911. Thereafter, additional stories will be added.

BROOKINGS, S. DAK.—Bids were received on Dec. 28, for the construction of a court-house, and the following contracts were awarded: General to J. B. NELSON CONSTRUCTION CO., of Mankato, Minn.; heating, MARTIN & WIGMAN, of Green Bay, Wis.; plumbing, CHARLES WILKINS CO., of Minneapolis, Minn.; electrical, NIMIS & NIMIS, of St. Paul, Minn. The structure will be three stories high of Bedford limestone. Total cost, $100,000.

MISSOULA, MONT.—Bids were received as follows, on Dec. 17, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a post-office at Missoula: Olsen & Johnson, Missoula, $182,965; William H. Maxwell, Great Falls, $160,880; Montana Construction & Supply Co., Missoula, $196,643; Sound Construction & Engineering Co., Seattle, Wash., $151,442; King Lumber Co., Charlottesville, Va., $162,497; Inter-State Construction Co., Saginaw, Mich., $161,518; J. H. Wiese, South Omaha, Neb., $152,590; Campbell Building Co., Salt Lake City, Utah, $168,800; John G. Unkefer & Co., Minerva, Ohio, $163,568; Conners Bros. Co., Lowell, Mass., $180,400; General Construction Co., Milwaukee, Wis., $164,990.

FULTON, MO.—The students of Westminster College plan to construct a gymnasium and student building. A committee, including the following, has been formed to solicit subscriptions: Willis H. Kerr, Frank L. Tinkham, Robert Foster, of St. Louis; W. B. Smith, Jr., of Fulton; and others. Estimated cost, $40,000.

ST. LOUIS, MO.—Plans have been prepared by Louis C. Spiering, Arch., Equitable Bldg., for the construction of a temple for the Ethical Culture Society. It will be in memory of the late Prof. W. L. Sheldon. The site for the memorial, at 3646-50 Washington Boulevard, has a frontage of 100 ft., with a depth of 240 ft. to the alley. The building will be about 70 × 103 ft. Cost, $100,000.

EL PASO, TEX.—Plans are nearing completion for a commercial building for H. B. Stevens & Co., to be erected here, and the contracts will be awarded some time in February. It will be a fireproof structure, 120 ×

150 ft., five stories high, of reinforced concrete. Brubaker & Stern, 23 North Pennsylvania Ave., Indianapolis, Ind., and of El Paso, are the Archs. Estimated cost, $100,000.

HOUSTON, TEX.—We are officially advised that the contract for erecting a 12-story fireproof bank and office building for the Union National Bank has been awarded to the WESTLAKE CONSTRUCTION CO., 717 Locust St., St. Louis, Mo. Mauran & Russell, Archs., Chronicle Bldg., Houston, prepared the plans.

*ROSWELL, N. MEX.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., Feb. 2, for the construction (including plumbing, gas piping, heating apparatus, electric conduits and wiring), of the U. S. post-office and court house at Roswell.

*SALT LAKE CITY, UTAH.—Bids will be received by James Knox Taylor, Superv. Arch., Washington, D. C., until 3 p. m., Feb. 3, for the extension, remodeling, etc. (including plumbing, gas piping, heating apparatus and electric conduits and wiring system), of the U. S. post-office and court house at Salt Lake City.

OGDEN, UTAH.—The Crane Wholesale Plumbing Co. plans to construct a 3-story building on Wall Ave. Estimated cost, $40,000.

PORTLAND, ORE.—A building permit was issued recently for an apartment house of a new type, to be built for the Goodman estate, at the northeast corner of Lucretia and Everett Sts. The building will be a 4-story brick, and the estimated cost is $60,000. Harvey & Hegner are the Archs. These will be the first so-called "bachelor" apartments in Portland.

FRESNO, CAL.—H. C. FARLEY, of Oakland, has secured the contract, at $199,500, to erect a 5-story reinforced-concrete hotel in Fresno. Edward T. Foulker, Crocker Bldg., San Francisco, is the Arch. H. H. Brix, stockholder of the Hotel Co., will act as Building Supt., and E. E. Manheim, Pres. of the Fresno Hotel.

LOS ANGELES, CAL.—Morgan, Walls & Morgan, Archs., 232 North Main St., have been commissioned to prepare plans for a building to be erected by Isaac N. Van Nuys, at the southwest corner of Spring and Seventh Sts. The plot is 170.22 × 155.65 ft.

The HUGHES MFG. CO., 1430 South Alameda St. has been awarded the contract, at $40,000, for the interior finish in the 12-story building being erected at Seventh and Olive Sts. for the Los Angeles Athletic Club. Parkinson & Bergstrom are the Archs., Security Bldg.

The ALTA PLANING MILL CO. has been awarded contract for the erection of three additional stories to the 5-story reinforced-concrete office building being erected at Third and Hill Sts. for the Ferguson Co. George H. Wyman, Henne Bldg., is the Arch. Cost, $56,786.

LOS ANGELES, CAL.—G. A. Howard, Jr., Arch., Grant Bldg., is preparing plans for remodeling Simpson Auditorium, on Hope St., to be used by the Third Church of Christ Scientist. A front of stone and brick, will be built. Estimated cost, $50,000.

R. B. Young & Son, Archs., Lankershim Bldg., are preparing plans for two 3-story brick apartment houses, 50 × 147 ft. and 62 × 145 ft., to be erected on Flower St., between Sixth and Seventh for Dario Oreno. Each building is to have pressed brick facing, terra cotta and artificial stone trim, concrete foundations, composition roofs and steam heat.

VENTURA, CAL.—Norman F. Marsh, Arch., Broadway Central Bldg., Los Angeles, reports general details for the polytechnic high school to be erected at Ventura have been decided upon as follows: two buildings will be constructed, an administration building, 2 story and basement, 108 × 64 ft. with a 1-story wing, 40 × 60 ft.; also a science hall, one story and basement, 112 × 60 ft. Construction will be of reinforced concrete entirely. Estimated cost, $65,000.

RIVERSIDE, CAL.—Norman F. Marsh, Arch., Broadway Central Bldg., Los Angeles, has been commissioned to prepare plans for a polytecnic high school to be erected at Riverside, for which $200,000 is available for buildings and $50,000 for furnishing. Five buildings will be erected, all designed in Greek Classic styles. The administration building in Greek Ionic, will be two stories and basement in shape of the letter "T," extreme dimentions, 180 × 180 ft. The commercial high school building, will be two stories, in Greek Corinthian, 110 × 65 ft. The science and agriculture building will be in Greek Doric, two stories and basement, 120 × 80 ft. The manual arts building will be 1-story with a mezzanine floor. 160 × 120 ft. There will also be a building to house the power plant. A gymnasium building will probably be added to the group.

WINNIPEG, MAN.—The city has decided to call for competitive plans for the proposed tuberculor hospital to cost $200,000. Address M. Peterson, Secy. Civic Board of Control.

Samuel Hooper, Provincial Arch., is preparing plans for the proposed Brandon Asylum for the Insane. Work will start next spring and the buildings will cost approximately $500,000.

Bids will be received soon for the proposed parliament buildings to be erected here, at a cost of approximately $1,000,000. Samuel Hooper, is Provincial Arch.

CARCROSS, YUKON.—Bids will be received by the Secretary of the Department of Indian Affairs, Ottawa, Ont., until Feb. 26 for erecting an Indian School here.

WATER SUPPLY—IRRIGATION.

HORNELL, N. Y.—The city has voted to spend $36,000 for a central fire house station and $100,000 for a water storage reservoir.

UTICA, N. Y.—The Consolidated Water Co. will install an additional sterilization plant for its southern watershed supply system.

WATERVLIET, N. Y.—The city has decided to construct a municipal water-works system.

*ORISKANY FALLS, N. Y.—Bids were received by the Board of Trustees, on Dec. 22, for the construction of a gravity system of water-works, consisting of a 13,000,000-gallon reservoir, concrete dam, approximately 25,000 ft. of 12, 10, 8 and 6-inch pipe, 37 hydrants, 36 valves and all accessories, material, tools and labor necessary to complete the system, bids received for the whole work only. We are officially advised that the contract has been awarded to JOHN SIEGRIST, Utica, N. Y., at $26,794.

SOHO, N. J.—Bids will be received by the Building Committee of the Board of Chosen Freeholders of Essex County, Newark, N. J., until 3 p. m., Jan. 6, for furnishing and laying water pipe, with the necessary connections, for the Tuberculosis Hospital at Soho. Louis E. Voorhees is Chn.

BEAVER FALLS, PA.—The contract for constructing the dam and reservoir of the Commercial Water Co. has been awarded to L. ADAVASIO & CO., Youngstown, Ohio. Estimated cost, $300,000.

SABILLASVILLE, MD.—Calvin W. Hendrick, Ch. Engr. Baltimore Sewerage Comn., Baltimore, Md., has been engaged by the Maryland Tuberculosis Sanitorium, Sabillasville, to investigate a source of water supply for the institution.

JONESBORO, N. C.—White & Piatt, Consulting Engrs., Durham, N. C., are preparing plans for the construction of a water-works plant here. Estimated cost, about $25,000. Noted on Dec. 22.

KIRKWOOD, GA.—Water and sewer bonds for $60,000 were sold on Dec. 20 by the city.

CHIPLEY, FLA.—The city has awarded the contract to MOORE & GAMMON, Chipley, for constructing the water-works system. Estimated cost, $20,000.

PENSACOLA, FLA.—The City Council has awarded the contract to the AMERICAN CAST IRON PIPE CO., Birmingham, Ala., for 18,000 ft. of 6-in. c.-i. water main extension. Contracts for hydrants and lead have been awarded to AHRENS & OTT, and for water gate valves to the FAIRBANKS CO., both of New Orleans, La.

LEXINGTON, KY.—The Prison Commission and the Lexington Water Co. have arranged for the construction of a pipe line, 22,000 ft. long, to the Reform School. The Legislature has appropriated $5,000 for the work.

NEW CARLISLE, OHIO.—The city has sold bonds for $20,000 for the construction of a water-works system.

NEWBURGH, OHIO.—Bids will be received by J. W. Shimek, Clk. Bd. of Control and Director Public Service, until noon, Jan. 21, for furnishing material and labor necessary to improve East 105th St. (Elroy) by constructing water mains therein. Bids will be received in accordance with plans and specifications on file at the office of the clerk and at the office of The Wm. H. Evers Engineering Co., 332 The Arcade, Cleveland, Ohio.

MITCHELL, IND.—The City Council has let a contract to build a water system for the City to S. S. ROYLAND.

VINCENNES, IND.—The Vincennes Water Works Co., Vincennes, is in the market for the purchase of mains for extending its plant.

FLINT, MICH.—The city has engaged William G. Clark, Consult. Engr., Toledo, Ohio, to supervise the construction of the proposed water-works system, which will include a new pump house, filtration plant and the extension of the water mains.

HOLLAND, MICH.—The Board of Public Works is considering the construction of a pumping station at 21st St. Estimated cost, between $12,000 and $15,000.

ANNA, ILL.—Bids will be received until Jan. 9, by the City Council, for constructing a water-owrks system. Estimated cost, $50,000.

*CHICAGO, ILL.—Bids will be received by the city until 11 a. m., Jan. 19, at the office of B. J. Mullaney, Comr. Pub. Wks., City Hall, for furnishing and installing in place two 20,000,000-gallon centrifugal pumps and two 1,000-HP. synchronous electric motors, together with piping, wiring, switchboard and other appurtenances, at the 22d St. pumpng station, according to plans and specifications on file in the office of the Department of Public Works, City Hall, 200 East Randolph St.

WHEATON, ILL.—We are officially advised that the city will install a new pumping outfit, with a concrete storage reservoir, new engines and a central well or pump pit, 70 ft. deep, to connect two old 10-in. wells, whose depth is 175 ft. each. Arthur L. Webster is City Engr.

SPARTA, WIS.—Bids will be received until Jan. 5, by the city, for a high-duty pumping engine of 1,500,000 gallons capacity. C. H. Gregory is Supt. Water Dept.

BOONE, IOWA.—The citizens, on Dec. 12, voted to issue $180,000 of bonds for additions and extension to the water-works. Otto Hile is City Clk.

WHITTEMORE, IOWA.—The citizens, on Dec. 19, voted to issue $7,000 of bonds for the construction of a water-works system.

ATLANTIC, IOWA.—Bids will be received until Mar. 1 by the city for improving the electric light and power plant and uniting it with the water-works. Estimated cost, $40,000.

RIPPEY, IOWA.—Bids will be received until 8 p. m., Feb. 6, by J. A. Haberer, Town Clk., for the construction of a water-works system. Plans are on file with the Town Clerk and the Des Moines Bridge & Iron Co., Des Moines.

FARIBAULT, MINN.—D. F. Mackenzie, City Recdr., will receive bids until 8 p. m., Jan. 16, for drilling an artesian well about 1,000 ft. and cleaning and casing old wells at the water-works pumping station.

ST. PAUL, MINN.—Bids will be received until noon, Jan. 7 by John Caulfield, Secy. Bd. Water Comrs., for all iron water-gates, hydrants, valves and service boxes required during the year 1911.

SCAMMON, KAN.—The City Council will extend the water mains in the north part of the city to provide persons living on Perry and Keith Sts. city water. It is estimated the extension will require 1,200 ft. of 2-in. pipe.

CORTLAND, NEB.—The village is considering the construction of a water-works system. A committee has been appointed by the City Board to ascertain the cost.

FAIRBURY, NEB.—The city has purchased the water plant of the Fairbury Electric Light & Power Co. for $92,500. Bonds have been voted for $125,000 for the purpose. The balance of the bond issue will be spent for improvements and extensions. G. W. Meyers is Supt.

SOUTH OMAHA, NEB.—The South Omaha Water Co., it is reported, is planning to lay mains to supply the stock yards district with water from the Missouri River. The company will also construct a storage reservoir of 4,000,000-gallons' capacity.

LEMMON, S. DAK.—The Des Moines Bridge & Iron Co., Des Moines, Iowa, is preparing plans for the installation of a water-works system here.

ONIDA, S. DAK.—Bids for the construction of a water-works system from plans prepared by the Des Moines Bridge & Iron Co., Des Moines, Iowa, will be received by the Town Board, until 3 p. m., Jan. 11.

Plans and specifications are on file with E. E. Brooking, Town Clk., where they may be examined and forms of proposals obtained.

LANDER, WYO.—The Secretary of the Interior has approved the contract awarded by H. N. Savage, Supervising Engr., to EMANUEL THOMAS, Byron, Wyo. for the construction of distributary ditches under the Frannie Canal and Lateral A of the Shoshone Irrigation project, Wyo. The work involves the excavation of about 21,000 cu. yds. of material. The work covered by Schedules 3 to 6, inclusive, involving the construction of structures under Frannie Canal and Lateral A, will be done by force account.

HOPKINS, MO.—The city is considering the construction of a municipal water-works plant. G. E. Denlin is Mayor.

KANSAS CITY, MO.—Bids will be received by the Board of Fire and Water Commissioners, E. B. Harrington, Secy., until Jan. 26 for the construction, delivery and erection of a horizontal shaft centrifugal pump, direct-connected to a vertical cross-compound engine, of a capacity to deliver 30,000,000 gallons of water, 50 ft. high, at a speed not exceeding 150 r. p. m. W. Kiersted is Ch. Engr. Water Dept.

SHERMAN, TEX.—The city is considering the extension of the water mains in several streets.

GEORGETOWN, TEX.—The City Council has engaged F. H. Lancashire, Dallas, Tex., to prepare plans and specifications for the reconstruction of the old water and light plant. Bonds for $45,000 have been sold.

SAN ANTONIO, TEX.—The San Antonio Water Co., San Antonio, is preparing to extend its mains to give additional service. The company has awarded a contract to I. H. POTONOWITZ for 1,500,000 lbs. of mains, consisting of 6, 8, 10 and 12-in. piping.

POLYTECHNIC, TEX.—The city is considering the construction of a municipal water-works system. Estimated cost, from $30,000 to $32,000. John Mead is Engr.

PORT LAVACA, TEX.—The City Council, which recently appointed a committee to investigate matters connected with the proposed construction of a water-works system, is contemplating the construction of a dam across Linn's Bayou to form a storage reservoir, to have a capacity of about 36,000,000 gallons of water.

PECOS, TEX.—A large number of irrigation systems are being constructed in the valley of the Pecos River and other sections in the Pecos region. The installation of a large amount of irrigation pumping machinery will be required in these works. Among the larger companies and the proposed cost of the respective projects are the following: Orient Irrigation Co., $750,000; Arno Cooperative Co., $350,000; Porterville Canal Co., $215,000; Toyah Valley Irrigation Co., $300,000; Imperial Irrigation Co., $300,000; Fort Stockton Lands Co., $150,000; Red Rock Canal Co., $84,000; Big Valley Irrigation Co., $68,000; Farmers' Independent Canal Co., $50,000; Pecos & Toyah Lake Irrigation Co., $1,000,000.

BRADY, TEX.—The Atchison, Topeka & Santa Fe Ry. Co. is contemplating the construction of a large storage reservoir here. Estimated cost, $20,000.

STAMFORD, TEX.—The Stamford Water-Works Co. has awarded the contract to W. J. COX, Stamford, for constructing a reservoir. Gurley & Hill, Stamford, are Engrs.

AUSTIN, TEX.—The city has rejected all bids for the construction of a reinforced-concrete filtering trench. Estimated cost, about $10,000. G. S. Iredell is City Engr.

RUSH, TEX.—The citizens, on Dec. 12, voted bonds for the construction of a water-works system.

ADA, OKLA.—The city voted $100,000 of bonds for the extension of the water-works system.

OKLAHOMA CITY, OKLA.—Alexander Potter, Consult. Engr., 116 Liberty St., New York, has recommended an expenditure of $1,250,000 for increasing the water supply.

CIMARRON, N. MEX.—T. W. Jaycox, Consult. Engr., Denver, Colo., received bids, on Dec. 20, for the construction of a gravity system of water-works for Cimarron. The lowest bid was that of the Cooke-Gregory Engineering Co., Joplin, Mo., at the following prices: 13,350 lin. ft. 8-in. wood stave pipe, complete, 44.5 cts.; 23,560 lin. ft. 6-in. wood stave pipe, in place, 36 cts.; 1,350 cu. yds. excavation in reservoir, 40.5 cts.; 200 cu. yds. concrete, $6.50; 130 cu. yds. ground clay puddle, $1.10; 4,565 lbs. c.-i. pipe, 3.5 cts. 855 lbs., special castings, 5.75 cts.; 12,973 lin. ft. 8-in. wood sta[illegible]pe, complete, 55 cts.; 12,380 lin. [illegible]n. wood stave pipe, in place, 44 cts.; [illegible] lbs. special air trap, 5.75 cts. Total, in[illegible] valves, hydrants, etc., $32,329. Oth[illegible] were: Midland Constructing Co., F[illegible] Kan., $36,730; Hibbs Hardware Co[illegible]ton, N. Mex., $37,458; Marshall Bros., [illegible] Animas, Colo., $40,605; S. B. Morrison, [illegible] Colo., $41,380; McKay & Reed, Sa[illegible] City, Utah, $45,198; Westcott-Doa[illegible] Denver, Colo., $45,067; MacArthur Bro[illegible] $45,805; P. O'Brien Co., Denver, Colo[illegible]8; W. D. Lovell, Minneapolis, Minn[illegible]08; T. A. Hayden, Santa Fe, N. [illegible] $49,576; H. B. Ikler, Glenwood Springs [illegible] $43,066.

LA UNION, N. MEX.—J. [illegible] will install an irrigation pumping [illegible] upon his land near here.

W. C. Wilkins, El Paso, Tex[illegible] recently purchased a tract of land near [illegible] will install an irrigation pumping pl[illegible] ditch system.

ARTESIA, N. MEX.—The Am[illegible] Sugar Refining Co. contemplates erec[illegible] a large sugar-beet factory here. D. [illegible] Sunday, Topeka, Kan., District Mgr., [illegible] recently had a conference with the fa[illegible] of the Artesia section of the Pecos R[illegible] Valley, with the view of interesting [illegible] in the planting of sugar beets with wh[illegible] supply the factory. He agreed to inst[illegible] irrigation pumping plants where needed.

DOUGLAS, ARIZ.—Bids will [illegible] received by the Board of Water Commi[illegible]rs until Jan. 19, for the construction of [illegible] municipal water system. Bids are to be [illegible]ressed to R. G. Arthur, Secy. Plans and [illegible]fications can be obtained from E. L. A[illegible] & Co., 426 Beols Bldg., Kansas City, M[illegible] upon payment of $5.

LOOMIS, WASH.—The White[illegible] Irrigation & Power Co., Loomis, has [illegible] incorporated to irrigate 10,000 acres [illegible] fruit land in the Okanogan country. The [illegible] lies in the neighborhood of Loomis.

NORTH YAKIMA, WASH.—The Secretary of the Interior has awarded the contract to NELSON RCH, Prosser, Wash., for the construction of about 75 miles of laterals in connection with the Tieton unit of the Yakima irrigation project. The contract price is $50,160.

SPOKANE, WASH.—John Gifford, Purchasing Agt., will receive bids until 2 p. m., Jan. 13, for 100 4-in., 30 6-in. hydrants, 50 6-in. valves, Kal. Bell, 50 6-in. valves, C. K. Bell, 25 8-in. valves, C. I. Bell, 26 10-in. valves, C. I. Bell and 25 12-in. valves, C. I. Bell.

*KLAMATH FALLS, ORE.—The Secretary of the Interior has awarded the contract to GEORGE C. CLARK, Everett, Wash., for the construction of the Lost River diversion works in connection with the Klamath Irrigation project, Oregon-California. The work consists of a concrete diversion dam, culverts, bridges, etc., and involves about 5,500 cu. yds. of concrete and 40,000 cu. yds. of excavation and embankment. The contract price is $98,556. Noted on Dec. 29.

ASTORIA, ORE.—Bids will be received by the Water Commission, until 2 p. m., Jan. 23, for furnishing labor and material for wood stave-pipe for the city. Specifications with blank forms of proposals may be obtained, and drawings examined at the office of Lars Bergsvik, Engr. Water Comn., Astoria.

TOLEDO, ORE.—D. J. Sidey, Engr., has been engaged by the City Council to make a preliminary survey for the proposed water-works system. The sum of $25,000 has been voted.

FREEWATER, ORE.—J. H. JAGER has been awarded the contract for the construction of the proposed water system here, at $14,340.

PORTLAND, ORE.—Bids will be received by the Water Board, until Jan. 10, for furnishing the following gate valves for c.-i. water mains: 20 4-in. valves, 350 6-in. 250 8-in., 15 10-in., 10 12-in., 8 30-in., to operate horizontally with bevel gear and indicators; one 2-in. valve, to operate horizontally with bevel gear and indicator.

SAN DIEGO, CAL.—C. W. CORBALEY, Los Angelos, has been awarded the contract for installing a salt-water circulating system for the street-car company in connection with its new power plant on lower E St. Estimated cost, about $50,000. The system calls for two 5-ft. conduits, to be built from a point out into the bay at the foot of E St. to the power house on Arctic and E Sts., where they will connect with a set of pumps. The company will use condensed salt water in the generation of steam for the operation of the new engines to be installed.

SAN BERNARDINO, CAL.—The Water Commissioners have awarded the contract for the drilling of the proposed well on the Perris donation, near the Perris reservoir site here, to J. WILLIAM SMITH at $5,600.

WHITTIER, CAL.—ROY SAWYER has been awarded the contract to lay 2,000 ft. of 12-in. and 14-in. cement pipe for Frank Sanderson on the Rincon ranch for irrigation purposes.

BRAWLEY, CAL.—Bids will be received until Jan. 10 by W. H. Wheelan, City Clk., for construction of municipal water-works. Estimated cost, $31,000. A. L. Sonderegger, Central Bldg., Los Angeles, Cal., is Engr.

PEMBROKE, ONT.—Bids will be received until Jan. 16 by the town for c.-i. water main and either lap welded or riveted steel piping. A. E. Fortier is Town Clk. T. Aird Murray is Consult. Engr., Toronto, Ont.

LETHRIDGE, ALTA.—We are officially advised that preliminary surveys have been made for a gravity water system from the Belly River, 43 miles. Estimated cost, $880,000. Noted on Dec. 15. C. W. Arnold is City Engr.

KERRISDALE, B. C.—Bids will be received by J. H. Floyd, City Clk., until Jan. 11, for the supply of valves and hydrants for the new water-works system.

ANGUSTURA (Sonora), MEX.—The Richardson Construction Co. is having surveys made for large system of irrigation which it will construct in the valley of the Yaqui River, near here, for the purpose of watering 500,000 acres of land owned by the Yaqui River Land & Irrigation Co. In connection with the irrigation project, a large hydro-electric plant will be installed. The plans for the irrigation system involve the construction of a reinforced-concrete dam, 180 ft. high, near Angustura. Estimated cost of the proposed enterprise, $4,500,000.

SEWERS.

*(*Denotes that this work is advertised in Engineering News.)*

HASTINGS, N. Y.—We are advised plans prepared for the construction of the sewer system for the village of Hastings have been approved by the State Board of Health. Approximately 19,000 lin. ft. of sewers will be laid, together with a small pump-house and pumping plant. The work will be advertised for soon. Ward & Carpenter Co., Tarrytown, N. Y., are the Engrs.

SYRACUSE, N. Y.—Bids will be received until Jan. 28 by the City Council for the Harbor brook intercepting sewer improvement. Plans were prepared by Engr. Glen D. Holmes and Secy. Harry Hamlin, of the City Council.

YORKVILLE, N. Y.—A resolution has been adopted by the Board of Trustees directing W. C. Stone, Engr., to readvertise for bids soon for the installation of a sewer system.

BUFFALO, N. Y.—The City Council has ordered a 10-in. tile sewer to be constructed in the south side of Hestel Ave., between Beard and Wesley Aves. The Commissioner of Public Works will advertise for bids.

NEW YORK, N. Y. — The lowest bid received on Jan. 3 by the Superv. Arch. of the Treasury, Washington, for conduit and wiring system in the New York Assay Office was that of Jandows Electrical Equipment Co., New York, $3,260.

HACKENSACK, N. J.—The contract for installing sewers in Richmond and Ethelbert Ave. has been awarded to the UNION CONSTRUCTION CO.

PHILADELPHIA, PA.—A permit has been granted to Costello & Co. for the erection of two operating houses for sewage disposal plants at the Torresdale filtration plant. The estimated cost is $18,725.

CHAMBERSBURG, PA.—Plans are being prepared by Albright & Mebus, Land Title Bldg., Philadelphia, for a sewerage system and disposal plant for Chambersburg. The estimated cost is about $150,000.

ERIE, PA.—Plans have been completed by B. E. Briggs, City Engr., for the construction of a sewage disposal plant. All bids received by the Council for the sewer in Cranbery St. from a point 80 ft. north of 12th St., southerly 700 ft., have been rejected.

PHILADELPHIA, PA.—A permit has been granted for the construction of a sewage disposal plant to take care of the sewage from the county prison, House of Correction, Home for the Indigent and the village of Holmesburg. The plant will take up about two or three acres, including the sites for the building.

SOUTH BETHEHEM, PA.—Plans are being prepared by Boro. Engr. Neumeyer to designate a site for the proposed sewage filtration plant for South Bethlehem. Plans will be submitted to the State Dept. of Health for approval.

CHESTER, PA.—The recommendation of the Sewer Committee has been adopted by the Council, that bids be advertised for the installation of sewers in the following streets: Central Ave., from Third St. to Seventh St.; Flower St., from Second St. to Seventh St.; Academy, or Gold St., running north and south, between 15th and 16th Sts.; Walnut and Providence Aves. and Edgmont Ave., from a point 120 ft. north from Eleventh to Twelfth St.; 22d St., from Upland St. to Potter St.; 20th St., from Madison St. to Hyatt St.; Fifth St., from Pennell St. to Lloyd St.; Caldwell St., from Eighth St. to Green St.; Lloyd St., from Fifth to Ninth St.; Pennell St., from Fifth St. to Ninth St.; Broomall St., from Front St. to Second St.; Ward St., from Second St. to Third St.; Edwards St., from Second St. to Third St., and the Philadelphia, Baltimore & Washington R. R. to Sixth St.; Chestnut St., from Tenth St. to Thirteenth St.; Madison St., from Third St. to Fourth St.; Front St., from Franklin St. to Fulton St.; Ninth St., from Kerlin St. to Butler St.; Potter St., from 18th St. to 23d St.

HARRISBURG, PA.—Plans have been submitted by B. E. Briggs, City Engr., for a sewage disposal plant that is to be erected by the city on the bay front.

POTTSVILLE, PA.—Bids will be received until noon, Jan. 17, by Charles Straughn, County Controller, for a sewage disposal plant, power plant, heating and ventilating and plumbing and electric wiring for the erection of a building for the insane at Schuylkill Haven, Pa.

BALTIMORE, MD.—The following bids were received by the Board of Awards Dec. 28 on Sanitary Contract No. 61, lateral sewers in District No. 40-C, and Storm-water Contract No. 11: Sanitary Contract No. 61—B. F. Sweeten & Son, 820 Sharp St., Baltimore, Md., $92,090; Wm. McCarthy & Co., 1007 American Bldg., Baltimore, Md., $94,737; Irwin Bros., Greenville, Ohio, $102,088; David Peoples, 60 Knickerbocker Bldg., City, $103,658; W. H. & C. F. Thompson, Baltimore, Md., $127,283; Ryan & Reilly, American Bldg., Baltimore, Md., $129,635; The Whiting-Middleton Construction Co., Sexton Bldg., Baltimore, Md., $138,283. Storm-Water Contract No. 11—Wm. McCarthy & Co., 1007 American Bldg., City, $14,584; B. F. Sweeten & Son, 820 Sharp St., Baltimore, Md., $15,297; W. H. & C. F. Thompson, Baltimore, Md., $15,845; Shreve & Caple, 848 Equitable Bldg., Baltimore, Md., $16,113; The Whiting-Middleton Construction Co., Sexton Bldg., Baltimore, Md., $16,469; David Peoples, 60 Knickerbocker Bldg., Baltimore, Md., $18,371; Ryan & Reilly, American Bldg., Baltimore, Md., $19,457; McCay Engineering Co., 9 East Lexington St., Baltimore, Md., $22,378.

BROOKLYN, MD.—Anne Arundel County will construct sewer on Carroll and Fifth Sts., Brooklyn; County Commissioners, Annapolis, Md., will receive bids until Jan. 17. S. O. Tilgman is Clk.

WASHINGTON, D. C.—The following contracts have been awarded by the Commissioners of the District of Columbia: Anacostia, D. C.—Item 1, excavation; Item 2, sewer brick masonry; Item 3, 12-in. pipe: GEO. HYMAN, Washington, D. C., Item 1, 49 cts.; Item 2, $13; Item 3, 54 cts. Bureau of Engraving—Sewer A, Item 1, excavation; Item 2, sewer brick masonry; Item 3, 24-in. pipe; Item 4, 21-in. pipe; sewer B, Item 1, excavation; Item 2, sewer brick masonry; Item 3, 24-in. pipe: GEO. HYMAN, sewer A, Item 1, 25 cts.; Item 2, $13; Item 3, 90 cts.; Item 4, 90 cts.; sewer B, Item 1, 25 cts.; Item 2, $13; Item 3, 90 cts. Langdon, D. C.—Item 1, excavation; Item 2, sewer brick masonry; Item 3, vitrified brick masonry; Item 4, concrete masonry D; Item 5, 6-in. sub-drain pipe; Item 6, 24-in. pipe; Item 7, 21-in. pipe: GEO. HYMAN, Item 1, 49 cts.; Item 2, $13; Item 3, $20; Item 4, $7; Item 5, 30 cts.; Item 6, $1.05; Item 7, 95 cts. Tenleytown, D. C.—Item 1, excavation; Item 2, sewer brick masonry; Item 3, 15-in. pipe; Item 4, 12-in. pipe; Item 5, 10-in. pipe: W. F. BRENIZER CO., Washington, D. C., Item 1, 50 cts.; Item 2, $13.50; Item 3, 68 cts.; Item 4, 60 cts.; Item 5, 55 cts. Florida Ave.—Item 1, excavation; Item 2, brick masonry; Item 3, concrete masonry D; Item 4, 6-in. subxdrain pipe: W. F. BRENIZER CO., Item 1, 80 cts.; Item 2, $21; Item 3, $7; Item 4, 30 cts. Rock Creek—Item 1, excavation; Item 2, sewer brick masonry; Item 3, vitrified brick masonry; Item 4, concrete masonry B; Item 5, concrete masonry C: W. F. BRENIZER CO., Item 1, $24; Item 2, $20; Item 3, $25; Item 4, $15; Item 5, $14.

WASHINGTON, D. C.—Bids were received as follows on Jan. 3, by the Commissioners of the District of Columbia, for the construction of an intercepting sewer on Rock Creek, between P St. and the Military Road (Section 1, between P St. and Massachusetts Ave.): Bidder 1, W. F. Brenizer Co., Washington; (2) E. G. Gummel, Washington; (3) Alfonso A. Alfieri, Morgantown, W. Va.; (4) Whiting & Middleton Construction Co., Baltimore; (5) B. F. Sweeten & Sons, Washington. Ordinary excavation (1), 77 cts., (2) 55 cts., (3) 63 cts., (4) $2.29, (5) $1.50. Brick masonry, (1) $14, (2) $14, (3) $10, (4) $20, (5) $20. Vitrified brick masonry, (1) $22, (2) $20, (3) $19.47, (4) $23.75, (5) $30. Concrete masonry "D," (1) $2.25, (2) $7, (3) $7.73, (4) $8.03, (5) $9.

RICHMOND, VA.—Plans have been completed by Richard Messar, Sanitary Engr. of the State Dept. of Health, for the sewage purification plant at Pine Camp Tuberculosis Sanatorium.

DALTON, GA.—HAIG & PURYEAR, Dalton, have been awarded the contract for the construction of about nine miles of sanitary sewer at $28,700. H. S. Jaudon Engineering Co., Savannah, Ga., is in charge.

BIRMINGHAM, ALA.—J. W. GURLEY & CO., Mobile, Ala., has been awarded the contract by the city for the installation of a storm sewer system for the northern section of the city. The estimated cost is about $300,000. Maury Nicholson is Cy. Engr.

GRANDVIEW, OHIO.—By a vote of 94 to 8 the village of Grandview has approved the issuance of $50,000 bonds for the building of sewage system and water-works plant.

SHELBYVILLE, IND.—The city council has awarded the contract to complete the sanitary sewer system in this city to the JULIUS KELLER CONSTRUCTION CO., Indianapolis, the contract price being $45,105. The work is to be completed by Sept. 1.

GARY, IND.—Bids will be received by the Board of Public Works for the construction of sewers: 3,120 ft. of 60-in. brick sewer, 2,055 lin. ft. of 36-in. brick sewer, 3,160 lin. ft. of 54-in. brick sewer, 3,320 lin. ft. 20-in. pipe sewer, 3,900 lin. ft. of 8-in. pipe sewer, 6,540 lin. ft. of 24-in. brick sewer, 4 gutter inlets, 5 catch basins, 12 manholes. Harry G. Moose is City Clk.

JASPER, IND.—The installation of a sewer system is contemplated by the city. The estimated cost is about $25,000.

KALAMAZOO, MICH.—JOHNSON & VAN DYKE, Kalamazoo, Mich., has been awarded the contract for the installation of the Fulford St. sewer.

DETROIT, MICH.—The Common Council of Detroit, at its meeting of Dec. 27, approved the following contracts for sewers made by the Dept. of Public Works, J. J. Haarer, Comr., 104 City Hall. Lateral sewers, Nos. 2166, 2174 and 2177 to JOHN S. SFFELD, at $2,097; lateral sewers Nos. 2175 and 2181 to WM. PORATH, for $2,056; the Harbough Ave. Public Sewer, to JULIUS PORATH, at $9,162; lateral sewers Nos. 2172, 2173 and 2178 to THOS. G. WHITTAKER, at $7,287.

GRAND RAPIDS, MICH.—The citizens of East Grand Rapids propose installing a complete sewerage system. Benjamin S. Hanchett is Pres, of the village.

MINNEAPOLIS, MINN.—Bids will be received by Henry H. Knott, City Clk., until 7.30 p. m., Jan. 13, for the furnishing of cement for sewers.

JOPLIN, MO.—The construction of septic tank sewerage system in South Joplin is under consideration. The estimated cost is $50,000. J. B. Hodgdon is City Engr.

ST. LOUIS, MO.—Bids will be received by the Bd. of Public Improvements, 300 New City Hall, until noon, Jan. 6, for the construction of a sewer in Rocky Branch Sewer Dist., No. 16. Plans and specifications may be seen at the office of the sewer commission Maxime Reber is Pres.

DALLAS, TEX.—J. C. UNDERWOOD, Dallas, has been awarded the contract by the City Commission for the construction of sewers in South Dallas, from Fair Grounds to Trinity River.

SAN ANTONIO, TEX.—The contract has been awarded to E. W. LENGS & CO. for installation of the Starr St. school sewerage system.

MUSKOGEE, OKLA.—Plans have been completed by Alexander Potter, 114 Liberty St., New York City, for sewage disposal. The estimated cost is about $100,000.

SHAWNEE, OKLA.—According to press reports bids are being received by the city for the construction of lateral sewers. The estimated cost is about $5,000.

FORT MORGAN, COLO.—Plans and specifications have been prepared by H. P. Oliver, City Engr., for the installation of a sewer in Fulton Heights. The estimated cost is $7,328. Bids will be advertised for soon.

SPOKANE, WASH.—Plans have been completed by Morton Macartney, Spokane, City Engr., for the proposed combination storm drain and sanitary sewer for Union Park. Beginning at the corner of Havana and Hartson St., running east on Hartson to Smith, north on Smith to Fourth, east on Fourth to Madelia St., north on Madelia to Third St., east on Third to Perry St., thence in a northwesterly direction to the corner of Sprague and Erie Sts, crossing Second, Pacific, Ivory St. and First St., thence north on Erie St. to an outlet in the Spokane River. The estimated cost is $314,000.

PORTLAND, ORE.—Bids will be received until 4 p. m., Jan. 10, by the Board of the City of Portland, Ore., for furnishing materials for the construction of sewers.

ASHLAND, ORE.—The contract has been awarded to T. R. BIDWELL for the construction of a sewer in Ashland, Ore. He will commence construction work at once.

BRAWLEY, CAL.—Bids will be received until Jan. 12 by W. H. Wheelan, City Clk., for the construction of sewer mains and outfall sewer and septic tank. Plans and specifications in office of City Clerk and in office of A. L. Sonderegger, Consulting Engineer, Central Bldg., Los Angeles. The quantities and estimates are: Septic tank, 24 × 200 ft., 8 ft. deep, capacity 85,000 gallons; vitrified pipe as follows: 300 ft. 8-in., 1,542 ft. 10-in., 8,250 ft. 12-in., 1,700 ft. 14-in.; 31 manholes; 3 catch basins; wooden outfall conduit. Estimated cost, $18,000.

CONCORD, CAL.—A resolution has been passed by the Board of Trustees authorizing the survey of the town. Plans and specifications will soon be prepared for the installation of a complete sewer system.

OAKLAND, CAL.—The contract has been awarded by the Board of Public Works to MERVY-ELWELL CO. for sewer extension, at $37,369, and the 36th St. sewer at $7,947. THE PACIFIC COAST DREDGING & RECLAMATION CO. was awarded the contract for dredging, at $13,000.

ORANGE, CAL.—The contract has been awarded to E. R. WERDIN & CO., Los Angeles, for the construction of an outfall sewer for the city of Orange.

LINDSAY, CAL.—The construction of a sewer system is under consideration. According to the estimate of Civil Engineer Lathrup it will cost about $40,000.

LOS ANGELES, CAL.—Property owners have been authorized to construct by private contract vitrified pipe sewers, manholes, flush tanks, etc., in Carondolet St., Marengo St. and Gramercy Place.

LOS ANGELES, CAL.—The contract has been awarded by the Board of Public Works for the installation of a sewer in Alvard, Mountain View, Temple and several other streets to RADICH & ZARUBICA, at $10,755. Also for installing sewer in Western and 15th Sts., to JOHN GENILLA, at $9,250. Also for a sewer in Hope and Second Sts., to JOHN BALCH & CO.

SAN FRANCISCO, CAL.—The contract has been awarded to the KEYSTONE CONST. CO. by the Board of Public Works for the construction of sewers and appurtenances for the North Point main sewer.

GARBAGE DISPOSAL.

*(*Denotes that this work is advertised in Engineering News.)*

BATAVIA, N. Y.—Plans for a garbage incinerator plant have been completed by the City Engineer and will be presented to the Board of Aldermen for action on Jan. 11.

BUFFALO, N. Y.—Bids will be received until 11 a. m., Jan. 11, by the Department of Public Works for the following, separate bids to be submitted: For making sundry alterations and additions to the present city refuse utilization plant, located on the north side of Hamburgh St. near Scott St., as follows: Masonry, cut-stone, plastering, paving, concrete work, etc.; structural iron and steel work, etc.; carpentry, painting, glazing, hardware, etc.; roofing, sheet-metal work, steel ceilings, etc.; plumbing, drainage, gasfitting, etc. Francis G. Ward is Comr.

ST. LOUIS, MO.—The lowest bidder in each district, it is reported, will be awarded the sprinkling contracts by the Board of Public Improvements. Under this arrangement two contractors, WILLIAM H. REDEMEYER and STEPHEN RATICAN, will secure the bulk of the contracts. The former is the low bidder in 19 out of the 40 districts in the city, comprising about 285 miles of streets, and the latter is the low bidder in seven districts, comprising about 115 miles of streets.

NAPA, CAL.—The City Council is considering the construction of a garbage crematory.

STREETS AND ROADS.

*(*Denotes that this work is advertised in Engineering News.)*

BOSTON, MASS.—Bids for repairing about 20,000 sq. yds. of asphalt pavement will be received until Jan. 10 by Louis K. Rourke, Supt. Streets. The contract is to cover time from Feb. 1, 1911, to Jan. 31, 1912.

It is proposed to construct ten miles of granolithic or other pavement sidewalks this year. Louis K. Rourke is Supt. Streets.

HARTFORD, CONN. — Bids for the construction of State road work were received at the office of the State Highway Commissioner, Capitol, on Dec. 30, as follows:

Town of Sterling, three sections gravel-telford road, on the road leading from the Sterling railroad station to the Rhode Island State line: (a) First Section, 5,810 lin. ft., (b) Second Section, 6,268 lin. ft., (c) Third Section, 9,442 lin. ft., (d) telford, (e) rubble drain. Ahern Bros., Norwich, Conn. (a) $6,730, (b) $8,720, (c) $7,033; (d) 60 cts., (e) $1; Roger Kennedy, Middletown, Conn., (a) $8,541 (b) $9,778, (c) $12,180, (d) 60 cts., (e) $1.25; A. Vito & Co., Thompson, Conn., (a) $8,100, (b) $10,730, (c) $7,380, (d) 75 cts., (e) $1.25; O. T. Benedict, Pittsfield, Mass., (a) $7,500, (b) $14,350, (c) $8,250, (d) 75 cts., (e) 95 cts.; A. D. Bridge's Son Co., Hazardville, Conn., (a) $9,607, (b) $13,455, (c) $11,700, (d) 75 cts., (e) $1.

Town of Canton, 6,123 lin. ft. gravel-telford road, including one reinforced-concrete culvert, 8-ft. span, on Indian Hill section: B. D. Pierce, Jr., Co., Bridgeport, Conn., lump sum, gravel, $18,000; telford, 75 cts. per lin. ft.; rubble drain, 90 cts. per lin. ft. William Maloney, West Hartford, $18,027, 60 cts., 75 cts.; C. A. Rossi, Torrington, Conn., $18,063, 60 cts., 75 cts.; Joseph Mascetti, Torrington, Conn., $11,266, 50 cts., 60 cts.; F. Arrigoni & Bro., Durham, Conn., $27,492, 50 cts., $1.25; Pierson Engineering & Construction Co., Bristol, Conn., $16,838, 50 cts., $1.25; Sternberg & Cadwell, West Hartford, $13,899, 50 cts., $1.25; C. W. Tryon, Meriden, Conn., $18,063, 50 cts., $1.25.

Town of Brooklyn, 5,050 lin. ft. macadam-telford road, on Main St.: Roger Kennedy, Middletown, Conn., $1.79 per lin. ft. for macadam, $2.30 per lin. ft. for telford, $1 per lin. ft. for rubble drain, 65 cts. per sq. yd. for cobble gutters; C. T. Benedict, Pittsfield, Mass., $2.53, $3.23, $1, 75 cts.; Tony Leo, Thompson, Conn., $2.89, $3.74, $1.05, 89 cts.; A. D. Bridge's Sons Co., Hazardville, Conn., $2.57, $3.27, $1, 60 cts.

Town of Preston, 7,825 lin. ft. graded-telford road, including one reinforced-concrete arch culvert, 8-ft. span, on the road from Sterling station to the Rhode Island State line; (a) grading, lump sum, (b) telford, (c) rubble drain, (d) rubble walls: Ahern Bros., Norwich, (a) $19,590, (c) $1, (d) $6; Roger Kennedy, Middletown, Conn., (a) $14,000, (b) 60 cts., (c) $1, (d) $5.50; O. T. Benedict, Pittsfield, Mass., (a) $19,995, (b) 75 cts., (c) 96 cts., (d) $5.95; William B. Wilcox, Norwich, (a) $21,000, (b) 70 cts., (c) $1, (d) $6; Clayton T. Curtiss, Glastonbury, Conn., (a) $14,004, (b) 90 cts., (c) $1.10, (d) $5; Tony Leo, Thompson, (a) $15,870, (b) 84 cts., (c) $1.19; Tony Carboni, Norwich, Conn., (a) $21,235, (b) $3.30, (c) $1, (d) $3.25; Eldredge Construction Co., Mystic, Conn., (a) $13,728, (b) $2.18, (c) 90 cts., (d) $4; A. D. Bridge's Sons Co., Hazardville, Conn., (a) $18,553, (b) 60 cts., (c) $1, (d) $6.

Town of New Fairfield, four sections graded-telford road, aggregating 160 lin. ft., including one I-beam reinforced-concrete culvert; (a) First Section, 1,845 lin. ft., (b) section, 1,000 lin. ft., (c) 630 lin. ft., (d) 690 lin. ft., (e) lump sum price for four sections, (f) telford, (g) rubble drain: Goodman Trumbull, Litchfield, Conn., (a) $4,495, (b) $2,966, (c) $1,176, (d) $1,140, (e) $9,776.40, (f) 90 cts., (g) $1.25; Joseph Mascetti, Torrington, Conn., (a) $2,717, (b) $530, (c) $450, (d) $2,000, (e) $6,300, (f) 60 cts., (g) 60 cts.; Norris Hatch, New Fairfield, Conn., (e) $10,800; E. G. Pardee, Bethany, Conn., (a) $10,000, (b) $2,500; (c) $2,000, (d) $2,500, (e) $17,000, (f) 65 cts., (g) $1; B. N. Beard Co., Shelton, Conn., (e) $12,240, (f) 65 cts., (g) $1.

Town of Litchfield, 3,100 lin. ft. graded-telford road, and Town of Harwinton, 732 lin. ft. graded-telford road. This is the new road for the elimination of two dangerous grade crossings at East Litchfield. The work involves much heavy cutting and filling. The figures given below embrace both sections: The B. D. Pierce, Jr., Co., Bridgeport, $11,000 for entire grading, 80 cts. per lin. ft. for telford, 85 cts. per lin. ft. for rubble drain; A. Vito, Thompson, Conn., $16,861, 90 cts., $1.25; F. Arrigoni & Bro., Durham, Conn., $17,081, 99 cts., $1; John de Michael & Bro., Torrington, Conn., $15,902, 50 cts., $1; William Maloney, West Hartford, $14,178, 60 cts., 75 cts.; O. T. Benedict, Pittsfield, Mass., $13,987, 60 cts., 75 cts.; Pierson Engineering & Construction Co., Bristol, $11,000, 75 cts., $1; Joseph Mascetti, Torrington, Conn., $11,266, 50 cts., 55 cts.; Sternberg & Cadwell, West Hartford, $10,900, 50 cts., $1.25; C. W. Tryon, Meriden, Conn., $11,074, 50 cts., $1.

NEW ROCHELLE, N. Y.—The Common Council has decided to build curbs, gutters and sidewalks on Lafayette Ave., between Second and Sixth Sts.; also on Winthrop Ave. and Brook St.

SYRACUSE, N. Y.—The lowest bid received by the Board of Contract and Supply for paving Concord Pl., between Westcott and Allen Sts., was that submitted by John Young, at $6,508.

MT. HOLLY, N. J.—Bids will be received until Jan. 18 by Harry E. Dabell, Dir., Bd. of Chosen Freeholders, at Mt. Holly, for furnishing material and graveling road from Gardner's Corner through Akron to the Atlantic County line.

ALPINE, N. J.—Bids are asked until 8 p. m., Jan. 21, by Franklin W. Hopkins, Mayor, for building a stone road in the Boro. of Alpine, known as Sylvan Ave., Southern Section Boulevard, extending from the north line, Boro. of Tenafly, to the south-

ern line of lands of McNell, Alpine, a distance of 2,570.17 ft. or (.486) miles. Robert H. Monroe is Boro. Clk.

WASHINGTON, PA.—The County Board of Commissioners on Dec. 21 awarded the contract for furnishing the brick for the Meadow Lands-Houston road. The contract for this road has been awarded to the HALLAM CONSTRUCTION CO., of Washington, at $31,980. The contracts for brick road were awarded to four firms: PITTSBURG BUFFALO CO., one-fourth, at $15 per 1,000; DONLEY BRICK CO., Washington, one-fourth, at $12.50 per 1,000; JAMES M. PORTER, Toronto block, at $15 per 1,000, and JAMES M. PORTER, American Sewer Pipe Porter block, $15 per 1,000.

Other contracts have been awarded as follows: NEELAN & DALY, of Pittsburg, on Section 3, of the Monongahela pike, at $21,523. HASTINGS & PIPER, of Charleroi, the Roscoe-Stockdale road, at $2,553. DONORA CONSTRUCTION CO., Donora, Section 4, of the Monongahela Pike, at $11,859.

PHILADELPHIA, PA.—The bids received on Dec. 27 by the Department of Public Works for street repairs during this year have been rejected. The estimated cost is $900,000.

SAVANNAH, GA.—Bids are asked by the Commissioners of Chatham County until Jan. 6, for furnishing cement gravel for improving and repairing the public roads. A. B. Moore is Chn.

PALATKA, FLA.—Bids will be received until Jan. 10, by E. S. Crill, Chn. Bd. of Bond Trustees, for grading, paving and curbing.

WETUMPKA, ALA.—Bids for road improvements will be received on Jan. 23, by H. J. Lancaster, Judge of Probate. The Solomon Norcross Co., of Atlanta, Ga., prepared the plans. Estimated cost, $170,000.

AKRON, OHIO.—The City Council has adopted resolutions declaring it necessary to improve Atlas St., from Market St. to Bailey Ave.; Bailey Ave., from Atlas St. to Portage Path; Stanton Ave., from Main St. east; Cuyahoga Falls Ave., from Tallmadge Ave. to the north corporation line. Also to build a sewer in Upson St.

COLUMBUS, OHIO.—The Board of County Commissioners of Franklin County has taken steps for the resurfacing of North High St., from the north corporation line of Columbus, to the town of Worthington, with tarvia, a distance of four miles. The work will be done in the spring and is estimated to cost $13,000.

MARION, OHIO.—The contract to pave Marion and Agosta pike has been awarded to D. C. O'CONNELL, at $5,950.

NEWARK, OHIO.—Bids were received on Dec. 26 at the office of City Auditor for the sale of $40,000 street paving bonds, the proceeds from which will be used in paving a number of streets in the spring.

CINCINNATI, OHIO.—The contract for the improvement of Wilstach St. with granite, from Denman St. to McLean Ave., has been awarded to KIRCHNER & CO., Eighth and Plum Sts., at $16,256. Bids were received on Dec. 20.

Bids will be received by the Board of County Commissioners until noon, Jan. 6, for improving Dick road, from Howard's Creek to the Oxford Road, in Crosby Township. Fred Driehs is Clk.

Bids will also be received by the Board, until noon, Jan. 20, for improving Dayton Pike, from Sharon to Butler County line in Sycamore Township.

CINCINNATI, OHIO.—Bids are asked until noon, Jan. 20, by the Board of County Commissioners, for the extension and improvement of Hillside Ave., from Anderson Ferry eastwardly, in Delhi Township.

COLUMBUS, OHIO.—Bids for furnishing the labor and materials for paving the Mound St. viaduct and approaches, and for the separation of street and railway grades, will be received until noon, Jan. 6, by H. S. Holton, Dir. Bd. of Pub. Service.

Bids will also be received by Mr. Holton until noon, Jan. 6, for furnishing the labor and materials for the construction of retaining walls, cement steps, cement walks, sodding and doing other miscellaneous work on West Rich St., between Lucas St. and the first alley east of Lucas St.

BLUFFTON, IND.—Bids were received on Dec. 29 by the Commissioners of Wells County for the construction of four gravel and stone roads. W. A. WOODWARD, of Ossian, was awarded the contract for three roads and C. W. NORTH, of Bluffton, for one road. O. D. Garrett is County Audr.

COVINGTON, IND.—The Commissioners of Fountain and Montgomery Counties have awarded a contract for the construction of the county line gravel road to FRED CUNNINGHAM, of Bloomfield, Greene County, at $10,480.

FOWLER, IND.—The Commissioners of Benton and Warren Counties will receive bids until noon, Feb. 1, for the construction of a county line gravel road. Lemuel Shipman is Audr. of Benton County.

FRANKFORT, IND.—Bids will be received by Charles F. Cromwell, Audr. of Clinton County, until Jan. 7, for the construction of the following gravel roads: The Bracken road No. 194, in Center Township, 5,540 ft. in length; the Baynum road, No. 134, in Jackson Township, 13,636 ft. in length; the Stephenson road, No. 145, in Owen Township, 10,626 ft. in length, and the Colcord road, No. 191, in Union Township, 13,000 ft. in length.

GREENCASTLE, IND.—The Commissioners of Putnam County have awarded a contract for the construction of a gravel road in Greencastle and Monroe Townships to MAHONEY & ALLEN, of Greencastle.

LAFAYETTE, IND.—The Commissioners of Tippecanoe County have received two petitions for the construction of gravel roads—one in Washington Township and one in Tippecanoe Township. Both petitions will be granted and bids advertised for.

LOGANSPORT, IND.—FRANK JUSTICE has been awarded the contract for constructing the Harvey gravel road between Cass and White Counties by the County Commissioners at $8,900.

PORTLAND, IND.—Bids will soon be asked by the Commissioners of Jay and Randolph Counties for the construction of the Cummins three-mile gravel road in these counties.

DETROIT, MICH.—A tract of 17 acres of land has been purchased by Frank Crandall, 26 Martin Pl., on North Line Ave., which he proposes to develop as part of the Ford Boulevard, now being constructed.

GLENCOE, ILL.—We are officially advised that the contract for 21,140 sq. yds. of macadam paving, bids for which were received on Dec. 20, has been awarded to JOHN A. McGARRY & CO., Security Bldg., Chicago, at $41,827. Windes & Marsh, of Winnetka, are the Engrs.

SIOUX CITY, IOWA.—The contract to pave several streets with 5-in. concrete, smooth and corrugated, bids for which were received on Dec. 17, has been awarded by A. A. Smith, Mayor, to FLINN & HANLON, at $1.18 for plain and $1.23 for corrugated. The total cost will be $34,000.

MINNEAPOLIS, MINN.—Bids will be received until 7.30 p. m., Jan. 13, by Henry N. Knott, City Clk., for furnishing for use in the construction of pavements during 1911, sandstone paving, blocks, creosoted wood paving blocks, vitrified paving blocks, crushed granite, granite curb, sandstone curb and Portland cement.

FORT LEAVENWORTH, KAN.—The lowest bid received on Dec. 22, by Capt. J. E. Normoyle, Q. M., U. S. A., for constructing roads, walks, etc., and sewers and water connections to buildings Nos. 328, 329 and 331, at Fort Leavenworth, was that submitted by Tholen Bros., of Leavenworth.

OSKALOOSA, KAN.—Bids will be received until noon, Jan. 9, at the Court-House in the County Clerk's office in Oskaloosa, for the construction of 2.27 miles of rock road between sections 4, 5, 8, 9, 16 and 17 in Oskaloosa Township, Jefferson County. Plans are on file and can be seen at the County Surveyor's office and at the Highway Engineer's office, Manhattan.

LINCOLN, NEB.—The Board of County Commissioners is receiving bids for constructing a permanent road running from the west approach of the O St. viaduct, north to P St., and thence on out to the section line, a distance of about one mile and a half. Adna Dobson is City Engr. Estimated cost, $12,000.

AUSTIN, TEX.—The contract for constructing concrete sidewalks and curbing on Congress St., from the Colorado River bridge to the capitol gates, has been awarded to JULIUS BRUEGGERMAN at 12 cts. a sq. ft. List of bidders noted on Dec. 22.

ALVIN, TEX.—We are officially advised that bonds will be issued about Feb. 1 for macadamizing or graveling about 90 miles of public roads in the eastern half of Brazoria County. E. L. Long is one of the promoters.

The City of Alvin has issued and had approved by the Attorney General $12,000 worth of bonds to be used in shelling and graveling the streets. This work will commence soon.

WALLA WALLA, WASH.—Bids will be received by the State Highway Board, Olympia, until 2 p. m., Jan. 18, for clearing, grubbing, grading, draining and macadamizing State Aid Road No. 99, known as the McDonald Road, in Walla Walla County.

SALEM, ORE.—Bids will be received by the Common Council until 8 p. m., Jan. 16, for paving 175,000, more or less, sq. yds. of street surface with hard surface pavement. W. A. Moores is City Recdr.

AZUSA, CAL.—George E. Glover, City Clk., will receive bids until Jan. 9 for improving Azusa Ave. and Center St., from one end of the city to the other. Plans, specifications and forms are on file in Mr. Glover's office.

LOS ANGELES, CAL.—The County Board of Supervisors of Los Angeles County received bids as follows on Dec. 27, for the improvement of a portion of the El Monte-Covina road. The road is 9.05 miles in length and divided into three sections: Section 1 will require 6,560 tons of oiled macadam paving; Section 2, 11,050 tons; Section 3, 11,210 tons:

A. J. St. John, 1017 Ingraham St., bid all three sections in combination, conditioned on the bidder being awarded the entire work, grading and constructing culverts on Section 1, $3,100; Section 2, $6,000; Section 3, $8,000; placing oiled macadam paving, $1.40 per ton; Class A concrete, $13 per cu. yd.; Class C, $12.

F. E. Prendergast, Sections 1 and 2 in combination, grading and constructing culverts on Section 1, $4,500; Section 2, $10,000; Sections 1 and 3 in combination, grading and culverts on Section 1, $4,500; Section 3, $12,000; Sections 2 and 3 in combination, grading and constructing culverts on Section 2, $10,000; Section 3, $12,000; all three sections in combination, grading and constructing culverts on Section 1, $3,750; Section 2, $9,400; Section 3, $12,000; placing oiled macadam paving, Section 1, $1.34 per ton; Section 2, $1.44; Section 3, $1.29; Class A concrete, $14 per cu. yd.; Class C, $13.

Oil Macadam Paving Co., of Long Beach, Section 2 only, grading and constructing culverts, $5,816; placing oil macadam paving, $1.54 per ton. Sections 1 and 2 in combination, grading and constructing culverts on Section 1, $2,294; Section 2, $5,816; placing oiled macadam paving, $1.54 per ton on each section; all three sections in combination, grading and constructing culverts on Section 1, $2,294; Section 2, $5,816; Section 3, $9,000; placing oiled macadam paving, $1.54 per ton on each section; class A concrete, $20 per cu. yd; Class C, $18.

The total amounts of the bids are A. C. St. John, $40,348; Oil Macadam Paving Co., $44,383; F. E. Prendergast, $64,313.

INGLEWOOD, CAL.—G. H. OSWALD has been awarded the contract for improving Commercial St., as follows: $3.30 a lin. ft. for grading and graveling; 36 cts. a lin. ft. for cement curb; 18½ cts. a sq. ft. for cement gutter; $50 for vitrified pipe drain; $1,700 for culverts complete; $510 for railing; $500 for sewer complete.

LOS ANGELES, CAL.—The following contracts have been awarded by the Board of Public Works: For improving Sutherland St., awarded to WITHERS & CRITES, at $4 per lin. ft. for grading and graveling; 34 cts. per lin. ft. for cement curb; 30 cts. per sq. ft. for vitrified block gutter; 14 cts. per sq. ft. for cement gutter; 11 cts. per sq. ft. for sidewalk. Aggregate cost, $5,831.

For improving Evergreen Ave., awarded to FRANK GILLESPIE at 6 cts. per sq. ft. for regrading and oiling; $2.20 per lin. ft. for grading and graveling; 32 cts. per lin. ft. for cement curb; 14 cts. per sq. ft. for cement gutter; 30 cts. per sq. ft. for vitrified block gutter, $160 for culverts at Cincinnati St.; $220 for culverts at Clinton St.; $250 for culverts at Michigan Ave.; $225 for culverts at Fairmont Ave.; $150 for culverts at Malabar Ave.; $130 for culverts at Winter St.; $140 for two catch basins south of Boulder St. Aggregate cost, $13,206.

DOWNEY, CAL.—The Board of Supervisors on recommendation of the Highway Commission has awarded to G. A. ROGERS the contract to construct the Valley Road, from Downey to American Ave., near Long Beach, at $42,822. The bid of the Macadam Paving Co. was $53,637.

SAN DIEGO, CAL.—The following bids have been received by the City Clerk for the improvement of E St.: Fairchild-Gilmore-Wilton Co., at 18.7 cts. a sq. ft. for paving; 38 cts. a sq. ft. for granite block gutters; 35 cts. a lin. ft. for cement curb; $50 for catch basins, etc.; the Barber Asphalt Paving Co., at 18.9 cts. per sq. ft. for paving; 38 cts. a lin. ft. for cement curb; 35.7 cts. a sq. ft. for granite block gutters; $195 for storm drains.

SAN FRANCISCO, CAL.—Willis K. Polk, Arch., Merchants' Exchange Bldg., has prepared drawings for the improvement of San Francisco's whole ocean frontage from the Cliff House to Sloat Boulevard, bordering the Spring Valley Water Co.'s land. The plan was drawn at the request of the Mayor. The improvements call for an elevated boulevard on the top of the sand dunes, affording an unobstructed view of the sea and land. The great highway at present lies behind the sand dunes and gives little or no view of the sea. A short piece of elevated boulevard a quarter of a mile long southward from the park has been made in a crude way to show the general effect of such an ocean driveway and promenade.

SANTA ANA, CAL.—The Orange County Highway Commission has filed a report with the County Board of Supervisors recommending the construction of 127.85 miles of good roads and the issuance of $1,400,000 in bonds to cover the cost of constructing same. The report contains the plans of the commission and a map of the roads to be constructed; one of the proposed roads joins the San Diego County highway on the south; the others will join the highways included in the Los Angeles highway work, and another with Riverside County, in Santa Ana Canyon. The various roads proposed and their lengths are as follows: Santa Ana to Riverside County line, 15.51 miles; Santa Ana to San Diego County line, 32.55 miles; Santa Ana to Los Angeles County line, 10.29 miles; one from Anaheim to Northam, 7.57 miles; from this road to Los Angeles County line, four miles; Anaheim to Olive, 3.37 miles; from this road to Olinda, 7.12 miles; Santa Ana to Buena Park road, 7.81 miles; from Garden Grove to Naples road, 11.12 miles; from this road to Los Angeles County line, 4.19 miles; from Westminster to Huntington Beach, 5.32 miles; Santa Ana to Newport Beach, 9.25 miles; from this road to Huntington Beach road, 4.86 miles; from Orange to McPherson, 4.02 miles; Fullerton to Olinda road, .87 mile. The Board of Supervisors will soon hold a meeting for final consideration of the recommendation.

SANTA MONICA, CAL.—Among the street improvements to be made soon, the following are included: Seventh St., from California Ave. north to San Vicente Boulevard in the Palisades, estimated cost, $24,000; Fremont Ave. is to be opened for a distance of 14,100 ft. at an estimated cost of $14,879; Central Ave. for 570 ft. and South Eighth St. for 386 ft. Thomas H. James is City Engr.

STOCKTON, CAL.—We are offcially advised that the contract for paving, with macadam, nine streets, bids for which were received on Dec. 28, has been awarded to O. MOREING & SONS, of Stockton.

MANUFACTURING PLANTS.

(*Denotes that this work is advertised in Engineering News.)

FALL RIVER, MASS.—The Pilgrim Mills Co. is being incorporated for the purpose of establishing a fine goods cotton mill on what is known as the "Bigberry" land, south of Pleasant St. and opposite 18th St. The directors will be: William C. Hawes, broker, of New Bedford, Pres.; Albert A. Jenks, of Fayles & Jenks, mill machinery manufacturers, Pawtucket, R. I.; James C. Potter, of Potter & Johnson, mill machinery, Pawtucket; Leon W. Campbell, of the Woonsocket Machine & Press Co., Woonsocket, R. I.; Eric W. Borden, cashier of the Massasoit-Pocasset National Bank; Chauncey H. Sears, and Eben C. Willey, Fall River. Mr. Willey is to be Agent and Supt. The capital stock will be $1,050,000.

LOWELL, MASS.—Permits for the erection of a boiler house and coal pocket and two dye house additions have been granted to the Massachusetts Cotton Mills by the Inspector of Lands and Buildings. The boiler house and coal pocket will be built along the banks of the Merrimack River at the confluence of the Concord River. It will be 292.7 ft. in length, 53 ft. wide and 61 ft. in height. The building will have a steel frame, encased in brick, and will be thoroughly fireproof. The dye house addit[illegible] will be of mill construction. The estim[illegible] of the first addition is $10,000, and [illegible] estimated cost of the second addition, $1[illegible]

LYNN, MASS.—The Charl[illegible] Sprague Box Co., will soon build a 3-s[illegible] brick and wood factory building. H. [illegible] Sprague, is Treas.

NEW BEDFORD, MASS.—P[illegible] have been prepared by Lockwood, Greene [illegible] Engrs., 93 Federal St., Boston, for a [illegible] building for the Soule Mill, New [illegible]. This building will be 90 × 100 ft., [illegible] stories high of standard slow burning mi[illegible] construction. Plans have also been complete[illegible] 2-story picker-house, 64 × 95 ft., an[illegible] waste house, 21 × 49 ft. The J. W. [illegible] CO., 683 Atlantic Ave., Boston, wi[illegible] the construction work. Noted on Dec[illegible]

MIDDLETOWN, CONN.—T[illegible] Rockfall Woolen Co., will build a brick [illegible] to its plant, two stories high, 48 × 8[illegible] heavy mill construction.

HAMDEN, CONN.—The Oven [illegible] Mfg. Co., at present located at [illegible] ford, is shortly to move to Hamden. [illegible] for the new building, which is to be [illegible] steel and concrete, two stories high and 2[illegible] 60 ft. in size. have been completed. The [illegible] Co. employs at present 150 hands, b[illegible] expects to increase this force. Drying a[illegible] japanning ovens are its products. The Sta[illegible] factory is to be discontinued.

NEW YORK, N. Y.—The [illegible] Loewer's Brewery Co., 528 West 42d St[illegible] having plans prepared by John P. [illegible] ser, 369 Third Ave., for the con[illegible] tion of a 2-story brick, steel a[illegible] concrete plant for bottling beer, to cove[illegible] plot at 536 and 538 West 41st St. Bids [illegible] will soon be received by the Architect.

J. D. ANDERSON SONS, [illegible] Ave., Brooklyn, have received the gen[illegible] contract to erect an addition to the ice [illegible] at the southeast corner of Bond and [illegible] Sts., for the Excelsior Hygenic Ice [illegible] Albert Ullrich, 373 Fulton St., Brook[illegible] is the Arch., and the Howland Kirk C[illegible] Church St., New York, the Engr.

I. B. Krinsky, tobacco manu[illegible]rer, 227 Bowery, New York, is having pla[illegible] prepared by C. M. Straub, 147 Fourth Ave[illegible] New York, for a 3½-story brick factory, mi[illegible] construction, 30 × 100 ft., to be erected a[illegible] the northwest corner of Roebling St. and N[illegible] Fourth St., Brooklyn, to cost $12,000.

NEW YORK, N. Y.—The contra[illegible] for furnishing and installing laundry ma[illegible]ry and appliances in the New York City Home for the Aged and Infirm Blackwell's Island, and in the general laundry, Metropolitan Hospital District, Blackwell's Island, have been awarded to the AMERICAN LAUNDRY MACHINERY CO., 132 West 27th St., at $11,894 and $5,455, respectively, by the Department of Public Charities.

ALBANY, N. Y.—George W. Hunt, Arch., is preparing plans for a carriage factory, 30 × 195 ft., of brick, two stories high, to be erected on Sheridan Ave., by Anthony Mosher & Son, 397 Sheridan Ave.

The Beverwyck Brewing Co., will build a bottling house, 50 × 100 ft., two stories and basement, from plans of J. Kastner & Deli, Archs., 1133 Broadway, New York. The general contract has been awarded to A. PASQUINI, 1123 Broadway, New York.

Extensive Car and Locomotive repair shops are to be erected here by the Delaware & Hudson Co., which with the requisite equipment will involve the expenditure of between $1,500,000 and $2,000,000. Plans for same are now in preparation. George H. Burgess, of Albany, is Ch. Engr.

BUFFALO, N. Y.—G. Morton Wolfe, Arch., Ellicott Square Bldg., has completed plans and is receiving estimates for an addition to the plant of the Augustine Rotary Engine Co., at Elmwood Ave., and the Erie R. R. It will be 50 × 100 ft., three stories, 50 × 25 ft., two stories of brick and mill construction to cost about $35,000.

ROCHESTER, N. Y.—The Fireproof Film Co., of which Henry Kuhn is Pres., has let the general contract to GEORGE C. ROSSELL for a 3-story brick factory building, 55 × 520 ft., to be erected at Dewey and Ridgeway Aves., from plans of F. A. Brockett, Arch., Cutler Bldg.

WELLSVILLE, N. Y.—The Pure Carbon Co., recently incorporated, will erect a factory building at South Main and Dyke St. Plans are being prepared.

GOWANDA, N. Y.—S. G. Keyes, Pres. of the Gowanda Agricultural Co., extensive manufacturers of plows, the main building of whose plant, four stories in height, was destroyed by fire on Dec. 20, states that the plant will be rebuilt and equipped at once.

HILLBURN, N. Y.—We are officially advised that the contract to erect a switch shop, 150 × 124 ft., one and three stories high, has been awarded to the TURNER CONSTRUCTION CO., 11 Broadway, New York. The owner is the Ramapo Iron Works.

MINETTO, N. Y.—According to reports, the Minetto-Meriden Shade Cloth Co. plans to establish a cotton mill here to employ 2,000 hands. Extensive electric power will be developed by dams.

ROCHESTER, N. Y.—The Fireproof Film Co., 27 Church St., Rochester, recently awarded to GEORGE C. ROSSELL, of this city, the general contract to erect a manufacturing plant, to cost $150,000. Frederick A. Brockett, Cutler Bldg., is the Arc[illegible]

WARSAW, N. Y.—The Warsaw Improvement Co. has awarded the contract to PORTER & NICHOLSON, of Warsaw, to erect a manufacturing plant to be occupied by the Rochester Embury Co. Estimated cost, $30,000.

JERSEY CITY, N. J.—The Jersey City Printing Co., J. F. Watson, Pres., 37 Montgomery St., has awarded to the JOHN W. FERGUSON CO., United Bank Bldg., of Paterson, the general contract to erect the 3-story reinforced concrete factory, 90 × [illegible] ft., on Communipaw Ave., this city. The plans were prepared by the Ferguson Co. Estimated cost, $150,000.

WEEHAWKEN, N. J.—The contract for the coach repair shop, to be erected by the West Shore R. R. Co. at the Weehawken terminal,

has been awarded to A. PASQUINI, 1123 Broadway, New York. The building will be of concrete and steel construction, 25 × 100 ft., two stories. Cost, $25,000.

PITTSBURG, PA.—The Linde Air Products Co., of Buffalo, N. Y., has purchased two acres of land near here, and plans to construct a plant, after which the Buffalo works will be discontinued.

SPRING CITY, PA.—Plans are being prepared by J. V. Poley, C. E., 162 Second Ave., ...ersford, for the construction of a knitting ... 45 × 90 ft., for the Spring City Knitting ... It will be four stories high, of slow-burning construction. The contract will be awarded in the spring.

STRASBURG, PA.—The Strasburg Mfg. Co. ...been incorporated with $350,000 capital ... E. P. Gebhard, of New York, is Pres.; ... Polk, Vice-Pres., and T. P. Ely, Secy. ...Treas., both of Suffolk. The company ...continue operation of the established ... and will make extensive improvements. ...main office is at 12 West 31st St., New York.

BALTIMORE, MD.—The Baltimore Hub, ...el & Mfg. Co., 328 North Holliday St., ... rebuild its plant at Harford Road and Belt Line R. R., recently burned, at a ... of about $15,000. New plans call for a ...ly fireproof and enlarged building.

CURTIS BAY (Baltimore post-office), MD. ...he Atlantic Fertilizer Co., Stock Exchange ...g., has plans for improvements to its ...nt at Curtis Bay, to include a double-decked pier about 250 ft. long, now under construction. New machinery will be installed in the building to be erected ...ch will increase the annual capacity from ...000 to 65,000 tons. The improvement will cost about $100,000.

WESTPORT, MD.—P. Singleton & Brother, 123 Ridgely St., Baltimore, will erect an additional building to be equipped for the manufacture of baskets and barrels. The structure will be of brick, three stories high and fireproof.

BROOKLIN, W. VA.—The Baltimore & Ohio R. R. Co. plans to establish a roundhouse and shops here, it is stated. A. M. Kinsman, of Baltimore, Md., is Consult. Engr. Cost, $500,000.

SHREVEPORT, LA.—The Texas Oil Co. plans to erect a refinery on Hart's Island, it is stated, which will cost about $1,000,000.

COLUMBUS, OHIO.—Plans are being prepared by the Reiley Shoe Mfg. Co., of Columbus, for an addition to be erected on South Front St., adjoining the present plant. The addition will be 62.5 × 187.5 ft., and five stories high.

TOLEDO, OHIO.—The Toledo Biscuit Co. plans to rebuild the factory at Locust and George Sts., recently destroyed by fire. Plans are being prepared and the contract will be let as soon as they are completed. It will be a 5-story and basement structure, 100 × 110 ft., of reinforced concrete. W. E. Bettridge is Pres.

YOUNGSTOWN, OHIO.—The Republic Iron & Steel Co., Frick Annex, Pittsburg, Pa., has awarded a contract to the MORGAN CONSTRUCTION CO. for a 16 and 14-in. continuous mill to be built on the site of the old Brown-Bonnell Works, Youngstown. The four remaining hand mills of the Brown-Bonnell Works, which are still in operation, will be razed within the next two or three months and the site will be occupied by the proposed continuous mill. The output of the plant will be about 10,000 tons a month.

BEECH GROVE, IND.—The "Big Four" (Cleveland, Cincinnati, Chicago & St. Louis) R. R. Co. announces that six additional shops will be erected at the company's immense plant, to include a paint shop, coach repairing shops, planing mill and a power-house. George P. Smith, of Cincinnati, Ohio, is Ch. Engr.

INDIANAPOLIS, IND.—Bids will be received about Jan. 20, by Bacon & Griswold, Archs., State Life Bldg., for the construction of a plant, for the Stork-Browning Carpet Sewing Machine Co. It will be a fireproof structure of reinforced concrete. Cost, $25,000.

MISHAWAKA, IND.—L. H. Snyder has ordered plans on which he will ask for bids for the erection of a cold storage plant and commodious barn near the Grand Trunk Ry. tracks.

MUNCIE, IND.—The Fraternal Mfg. Co., recently incorporated, is seeking a site on which to erect a factory. Bids will be received as soon as a location is secured. J. L. Munden, Dr. J. S. Coffman and C. A. Staunton are the Dirs.

TERRE HAUTE, IND.—The Arnold-Sandberg Machine Co., recently incorporated, will establish a factory in Terre Haute. D. B. Arnold is Pres.

WASHINGTON, IND.—The plant of the Washington Canning Co., recently destroyed by fire, will be rebuilt. Oliver M. Vance is Pres.

HUNTINGTON, IND.—Orton & Steinbrener have awarded a contract to the MORAVA CONSTRUCTION CO., for the structural steel for a factory to be built here. The brick work contract is yet to be let. Bids will be asked for soon.

INDIANAPOLIS, IND.—The Indiana Refrigerating Co., will spend about $40,000 in remodeling its plant at 232 South Pennsylvania St., next Spring. Three new boilers will be installed, etc.

LAPORTE, IND.—The Laporte Meter Co., recently incorporated with a capitalization of $150,000, will establish and equip a factory to manufacture gas and electric meters. V. P. Wilkins, E. H. Scott and Emmit Scott, are the Dirs.

BIG RAPIDS, MICH.—The Jones & Green Lumber Co., of Big Rapids, contemplates the rebuilding of its plant for the manufacture of flooring.

DETROIT, MICH.—Pollmar & Ropes, Cleland Bldg., will receive bids soon on the 3-story candy factory, 70 × 40 ft., to be erected for Fred Bossenberger, 249 Gratiot Ave. Cost, $20,000.

Spier, Rohn & Gehrke, Chamber of Commerce Bldg., have let the masonry contract for the 2-story fireproof factory for the Brown Cleaning Co., 257 Oakland Ave., to MARTIN & BARKHEISER, 660 Ellery Ave. The plant will be heated by steam.

The Fisher Body Co., Stanton Ave., Detroit, has awarded the general contract for its proposed 3-story and basement factory, 180 × 142 ft., to JOSEPH HORN, 33 Horton Ave., Detroit. Cost, $50,000.

E. R. Dunlap, 75 Webb Ave., has let the general contract to the VINTON CO., 120 Woodbridge St., East, for constructing a 2-story factory for A. Beer, 283 Franklin St.

CONSTANTINE, MICH.—Bids will be received, about Jan. 10, for the construction of a grain elevator, with a capacity of 20,000 bu.; also for a warehouse and a feed mill. The Farmers' Elevator & Coal Co., of which C. H. Brown is Secy., is the owner. The structure will be of wood construction, with a covering of galvanized iron.

FOWLERVILLE, MICH.—Charles Hill, of Fowlerville, is contemplating erecting a saw mill to replace the one recently destroyed by fire.

GRAND RAPIDS, MICH.—The Central Boiler & Supply Co., Coldbrook and Canal Sts., is having plans prepared for a factory for the manufacture of boilers and supplies.

MENOMINEE, MICH.—The Leison & Henes Brewing Co., 1200 Main St., is having plans prepared by Louis Lehle, 100 Randolph St., Chicago, Ill., for a 4-story addition, 60 × 60 ft., to the cold-storage plant.

MUSKEGON, MICH.—Bids will be received some time in March for the construction of a gear and transmission factory, four stories high and 200 × 110 ft., of reinforced concrete, for the Continental Motor Mfg. Co., B. F. Toby, Secy. Robinson & Campau, Housman Bldg., Grand Rapids, are the Archs. Estimated cost, $100,000.

NILES, MICH.—It is reported that the National Cable & Mfg. Co., of Niles, manufacturers of copper cable, has purchased the property of the Eagle Mfg. Co., and will remodel same for its manufacturing purposes.

PAW PAW, MICH.—It is reported that the Robinson Cider, Pickle & Vinegar Co., North Maine St., Benton Harbor, contemplates establishing a pickle factory in Paw Paw.

DETROIT, MICH.—Varney, Winter & Varney, Equity Bldg., are preparing plans and will receive estimates soon on a 3-story factory, 220 × 255 ft., for the Detroit Bridge Co., of Hamtramck. The plant will be constructed of stock brick, bedford stone, with composition roof, galvanized iron skylight, structural iron, cement floors and electric fixtures. Cost, $50,000.

The same architects will take bids soon on a 1-story addition, 92 × 145 ft., to the present plant of the Chicago Pneumatic Tool Co., at Second Ave. Cost, $20,000.

The Electric Welding Co., I. J. Kermode, Mgr., Third and Congress Sts., is contemplating building a new factory in the near future.

Smith, Hinchman & Grylls, Washington Arcade Bldg., are receiving estimates on the addition to the present plant of the Hargreaves Mfg. Co., Thos. E. Reed, Mgr., 60 18th St.

Louis Lehle, 103 Randolph St., Chicago, and R. E. Raseman, Penobscot Bldg., Detroit, Associate Archs., will soon take figures on the 3-story and basement addition to the Goebel Brewing plant. August Goebel, Secy., 351 Rivard St. Cost, $30,000.

R. E. Raseman, Penobscot Bldg., Detroit, is preparing plans for a 1-story factory, 90 × 125 ft., for the Swedish Crucible Steel Co., Rowland Bldg. Cost, $28,000.

Varney, Winter & Varney, Equity Bldg., will soon receive estimates on the 3-story factory, 90 × 220 ft., 225 × 86 ft., for the Briggs Mfg. Co., Walter O. Briggs, Pres, care of the architects. The plant is to be located at Leuschner Ave. and the Grand Fork Ry. Cost, $40,000.

MATTOON, ILL.—H. W. Clark, of Mattoon, manufacturer of the Clark meter box and water-works appliances, is contemplating building a modern factory (both iron and brass) and a machine shop. The company is desirous of securing information as to buildings, arrangements, equipment, etc.

MILWAUKEE, WIS.—Plans for a factory building to be erected on Chicago St., near Broadway, have been submitted to the Building Inspector, by J. Weilauer. It will be of brick and stone construction and will cost about $40,000.

MILWAUKEE, WIS.—H. P. Schnetzky & Son, 1318 Cedar St., are preparing plans for a 4-story store and light manufacturing building, to be erected by Grassler & Gezelschap at 214 Third St. The structure will be of brick, and will probably cost $25,000.

Plans are being prepared by the B. J. Johnson Soap Co. for two additions to be erected at its plant at Fourth and Fowler Sts. The buildings will be of sufficient size so that the company will be enabled to double the capacity of its plant.

D'HANIS, TEX.—The Seco Pressed Brick Co. has been organized here for the purpose of establishing a plant to manufacture brick. It has a capital stock of $300,000. The incorporators are F. Rothe, August C. Rothe, Joe Ney and others.

HARLINGEN, TEX.—The Harlingen Brick Works will double the capacity of its plant at this place, it is stated.

Lon Hines, of San Antonio, has organized the Mexican-American Importing & Mfg. Co., for the purpose of establishing a hat manufacturing plant at Harlingen, or at some other point in the lower Rio Grande Valley.

TEXLINE, TEX.—The contract to erect a plant for the Sixela Firebrick Pottery & Coal Co. has been awarded to the AMERICAN CLAY MACHINERY CO., of Bucyrus, Ohio. It will be a fireproof structure, of stone and iron. S. C. Walker, Box 32, is interested. Estimated cost, $100,000.

UVALDE, TEX.—F. M. Getzenaner, of this city, and others, are interested in the erection here of a fig-preserving factory.

CRYSTAL CITY, TEX.—Dr. E. S. Link, of this place, will erect a furniture factory here. He will also install an electric power plant which will furnish power for operating the furniture factory and irrigation pumping plants in this section. A saw mill is to be operated in connection with the factory.

GOLIAD, TEX.—B. W. Martin will erect a cotton ginning plant here, to replace the one recently destroyed by fire.

NACOGDCOHES, TEX.—A shuttle block factory will be established here by L. C. Russell of Chicago, and associates.

PECOS, TEX.—O. L. Williams, of Dallas, representing a syndicate of New York men, is arranging to erect a meat-packing plant at this place.

ARTESIA, N. MEX.—See item under Water supply—Irrigation.

MOSCOW, IDAHO.—The Idaho National Harvester Co. plans to double the present capacity of its plant, and also to add new machinery. The cost is estimated at $100,000.

FLAGSTAFF, ARIZ.—The Flagstaff Lumber Mfg. Co. will erect a planing mill and large box factory here. The company recently completed the installation of a lumber mill of 100,000 ft. daily capacity. It is also constructing a logging road from Flagstaff into a virgin tract of timber.

MESA, ARIZ.—The Mesa Dairy & Ice Co. has awarded the contract to the FRICK CO., Fulton Bldg., Pittsburg, Pa., for enlarging their cold storage and ice-making plant. The ice-making capacity is to be enlarged to 700 tons and the cold storage plant to 200 tons.

SPOKANE, WASH.—Bids are being received for the construction of a paper mill, concrete dam and power-house for the Inland Empire Paper Co. Peter Mogensen, P. O. Box 145, is the Engr. It will be of cement and lumber with steam and electrical machinery. Estimated cost, $500,000.

NEWPORT BEACH, CAL.—The National Soda Mfg. Co. has secured a site here for the erection of a refining plant. Work is to begin in February. It will be of concrete construction. About 40 to 50 men will be employed.

SAN PEDRO, CAL.—John A. Anderson, D. A. Parker and W. C. Reed will construct a fish-canning plant here, to cost $15,000.

MONTREAL, QUE.—The Canada Rubber Co. has taken out a permit for a factory on Monarch St., costing $250,000.

VALLEYFIELD, QUE.—The Grand Trunk Ry. Co. is reported to be considering this place for the establishment of extensive car works and for the building of engines. H. T. Kelley, of Montreal, is Ch. Engr.

BRANTFORD, ONT.—A mill for the manufacture of underwear will be built here. It will be 75 × 135 ft., four stories high, and is to employ 400 operatives. The Penmans Ltd. of Paris, Ont., is the owner. A dyehouse will also be built at the same time. Estimated cost, $50,000.

DRYDEN, ONT.—The Dryden Timber & Power Co. is completing plans for the erection of a paper mill here which, with equipment, will cost approximately $1,000,000. J. E. Fellows, of Chicago, Ill., is Pres.

ST. CATHERINES, ONT.—The Steel & Radiator Co., of Toronto has purchased a site of 35 acres here and will build an extensive plant for the manufacture of boilers and radiators.

WELLAND, ONT.—Plans are being perfected for the amalgamation of the Montreal Steel Co., of Montreal, and the Ontario Iron & Steel Co., of Welland, and the erection of a steel plant here to cost $1,000,000.

REGINA, SASK.—The Western Mfg. Co. has decided to increase the size of its plant here. The addition will be of reinforced concrete.

CHIHUAHUA, MEX.—Jose Lago, of this city, is having plans prepared for a meat-packing plant which he will erect here.

COLONIA DUBLAN (Chihuahua), MEX.—The furniture factory of Gaskell Romney, at this place, which was recently destroyed by fire, will be rebuilt.

MISCELLANEOUS CONTRACTS.

*(*Denotes that this work is advertised in Engineering News.)*

U. S. RECLAMATION SERVICE.—All news concerning canal and irrigation projects, etc., will be found under Water Supply—Irrigation.

SUBWAY.—Boston, Mass.—Plans have been prepared by W. J. McDonald, 85 Milk St., Boston, for the improvement of suburban traffic by building a 4-track subway from near Cottage Farm on the Boston & Albany R. R., to East Boston (by tunnel), via the Post-Office; a branch leaving at the Common and connecting with the Lynn narrow gage railroad in East Boston, via South Station and the narrow gage slip in Boston. Estimated cost $15,000,000. In addition a 4-track subway from the North to the South Station is planned to cost $6,000,000. The plans also propose the electrification of the Newtown circuit of the Boston & Albany R. R.; also of the Midland division of the New York, New Haven & Hartford R. R. and the suburban lines of the Boston & Maine R. R. The estimated cost of electrification is $2,500,000 for the Midland Division, $5,000,000 for the Boston & Albany R. R. and the B. R. B. & L. R. R., or narrow gage; and $3,000,000 for the Boston & Maine R. R., total, $31,500,000.

DREDGING, DOCK, ETC.—Boston, Mass.—Bids were received on Dec. 12, by Charles D. Daly, Fire Comr., for dredging, dock, building wharf, extending wharf and preparing berth for fire-boats. The contract has been awarded to W. H. ELLIS, at $6,176.

DREDGING.—Providence, R. I.—The contract for dredging Providence River and Harbor has been awarded to the COASTWISE DREDGING CO., Norfolk, Va. Bids were opened on Dec. 17 by Lt.-Col. J. C. Sanford, Corps Engrs., U. S. A., Newport, R. I. List of bidders noted on Dec. 22.

CRUSHED STONE.—New Haven, Conn.—Bids will be received until Jan. 6 by C. W. Kelly, City Engr., for furnishing crushed stone during the year 1911, as required by the Department of Public Works, of which at least 8,000 tons shall be screenings. Price to be stated for the stone at the crusher, in New Haven or f. o. b. cars New Haven or at the City Dock.

BRICK.—Cheshire, Conn.—The contract for furnishing 5,000,000 brick for the Connecticut State Reformatory buildings here has been awarded to the MILLDALE BRICK CO., Milldale, Conn.

METALLIC CASE SECTIONS, ETC.—New York, N. Y.—Bids have been received as follows for furnishing metallic case sections and bases, metallic desk sections and desks or stands and metallic curtain cases and bases for the office of the Clerk of the County Court House, New York County Court House: Canton Art Metal Co., Canton, Ohio, $29,627; Geo. W. Cobb, Jr., $37,473; Van Dorn Iron Works Co., $40,200; E. W. Nelson, $36,000.

*DREDGING, ROCK REMOVAL.—New York, N. Y.—Bids will be received until noon, Jan. 18 by Col. W. M. Black, Corps Engrs., U. S. A., for dredging and rock removal in the Hudson River, N. Y. Bids formerly advertised for this work have been rejected.

*PIERS.—New York, N. Y.—The New York Harbor Line Board will give a public hearing at 10 a. m., Jan. 25, in Room 809, 39 Whitehall St., New York, on application to Secretary of War by International Mercantile Marine Co. to advance piers in Chelsea section, North River. This in effect reopens the action of the War Dept., regarding extension of piers in New York. All interested parties are invited to attend and be heard. Col. Wm. T. Rossell, Corps Engrs., U. S. A., is Senior Member Bd.

GRADE CROSSING ELIMINATION.—Buffalo, N. Y.—An agreement has been signed by the Erie R. R. Co., and the Grade Crossing Commission of Buffalo for the elimination of grade crossings on the Niagara Falls and Intetrnational Bridge Division of the Erie R. R., in the northern part of the city, at Walden Ave., Doab St., Genesee St., East Ferry St., East Delavan Ave., Kensington Ave., Main St. and Military Road. The aggregate cost of the work, plans for which have been prepared and which will be principally street subway construction, will be over $1,000,000.

*TELEPHONE SYSTEM.—West Point, N. Y.—Bids will be received by the Quartermaster, U. S. A., West Point, until Jan. 30, for furnishing and installing a complete central energy telephone system.

JETTY, PIER, ETC.—Ventnor City, N. J.—The City Council on Dec. 21 awarded contracts for the construction of a municipal pier as follows: To JOHN W. COONEY, Atlantic City, for jetty; to INGERSOLL & WEEKS, Atlantic City, for pier, at $24,393, to WILBERT BEAUMONT, Atlantic City, for the building, at $26,000.

DOCK.—Philadelphia, Pa.—The Select and Common Councils on Dec. 29 approved a resolution, it is reported, forwarding the movement for the construction of a 1,700-ft. dock at the navy yard here.

*PIER.—Philadelphia, Pa.—Bids will be received until noon, Jan. 20, for the construction of the superstructure of the Vine St. pier. Estimated cost, about $350,000. J. F. Hasskarl is Acting Dir. Dept. Wharves and Docks.

RACE TRACK.—Waynesburg, Pa.—The Directors of the Waynesburg Fair and Agricultural Association on Dec. 22 awarded the contract for grading a half mile race track. The contract for the concrete work was also let. FREDERICK ROBINSON secured the contract for the excavation work. The concrete work will be done by CHARLES YODERS, East Waynesburg. In the spring contracts will be awarded for the construction of the grandstand, stables and halls. John G. Rhinehart is Pres.

TUNNELS.—Pittsburg, Pa.—The report submitted by Edward M. Bigelow, Consulting Engr., Allegheny County Comrs., provides for the construction of three tunnels through the South Side hills here. One tunnel will take care of the traffic to Brookline, West Liberty, Dormont, Mt. Lebanon and vicinity; a second will be an outlet to Crafton, Carnegie and that section. The third will open up a new outlet to the hilltop, Knoxville, Mt. Oliver, Carrick and surrounding territory.

PARKS, WHARVES, ETC.—Philadelphia, Pa.—The city has appropriated $465,708 for park work and $173,750 for wharves, docks and ferries.

GRAND STAND.—Annapolis, Md.—A steel grand stand will be erected here for the U. S. Naval Academy. Estimated cost, $22,000. Contract has been awarded for excavation to WILLIAM N. FRENCH, Annapolis.

TROLLEY HOISTS.—Washington, D. C.—Bids will be received by William Crozier, Ch. of Ordnance, War Dept., Washington, until Jan. 23, for furnishing five hand-operating shell trolley-hoists for turret chambers and ten hand-operating shell trolley hoists for magazines.

PURCHASE OF WARSHIP.—Washington, D. C.—The following bids were received on Dec. 22 by the Secretary of the Navy, Washington, for the purchase of the U. S. S. "Detroit": R. I. Corbett, 8 Bridge St., New York, $20,000; John F. Burke, 818 East Fifth St., South Boston, Mass., $16,565; Arthur H. Paige, New Orleans, La., $14,000; Boston Iron & Metal Co., Baltimore, Md., $15,267.

SWAMP DRAINAGE.—Newport News, Va.—George W. Warren, Engr., Bureau of Drainage, U. S. Dept. of Agriculture, has completed a survey of the swamp back of the city. He estimates the cost of draining the swamp area at about $27,000. The Chamber of Commerce is in favor of the plan of reclamation. About 5,000 acres could be reclaimed.

LIME.—Atlanta, Ga.—The Sewerage and Water Board has awarded the contract for supplying 50,000 barrels of lime to the LAGARDE SUPPLY & FERTILIZER CO., Ltd., Lake Charles, La., at $4.48 per ton.

DRAINAGE CANAL.—Howard, Miss.—The NORTH ALABAMA CONSTRUCTION CO., Oakchia, Ala., has been awarded the con-

tract for constructing a drainage canal from Howard, Miss., to Tchula Lake, by the Black Creek Drainage Commissioners at 12½ cts. per cu. yd. Bids were opened on Dec. 9. James Fontaine, Lyons, Miss., is Ch. Engr.

WHARF, ETC.—New Orleans, La.—A. C. Bell, Engr. Bd. Port Comrs., will prepare plans for the construction of a wharf, shed, etc., for the immigrant station. The wharf will be 300 ft. long with mooring clusters above and below, making a total length of 450 ft. and 40 ft. wide. The shed will be 280 ft. long by 25 ft. wide and 12 ft. high in the clear. Slips for the station's barge and cutter service will be built.

LEVEE.—New Orleans, La.—Bids were opened on Dec. 20 by the Board of State Engineers for the construction of the Atherton levee on the right bank of the Mississippi River in East Carroll Parish. The contract was awarded to JOHN G. SESSIONS at 12.44 cts. per cu. yd. Other bidders were: Helgason Bros., 14.45 cts.; T. R. Bobbitt, 14.90 cts.; Parker & Harris, 12.70 cts.; R. T. Clark, 13.40 cts.; N. C. Williamson, 17.90 cts. The levee is to contain about 50,000 cu. yds. of earth.

ELEVATOR.—Owensboro, Ky.—The following bids were received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., on Dec. 27, for the installation of a passenger elevator in the U. S. public building Owensboro. Llewellyn Iron Works, Los Angeles, Cal., $7,800, July 1, 1911; Otis Elevator Co., New York, $5,274, April 22, 1911.

DREDGE WORK. — Ashland, Ohio. — Surveys are being made for five miles of dredge work on the extension of the Jerome Fork improvement. T. Brindle is County Surv.

CANAL WORK.—Columbus, Ohio.—The State Board of Public Works, has requested appropriations of about $737,700 for 1911 and $732,000 for 1912 for work on the Miami & Erie Canal, north and south of Dayton.

LEVEE.—Vincennes, Ind.—Jacob S. Spiker has commenced a survey for the construction of a levee along the Wabash and Patoka Rivers for 80 miles. Estimated cost, $250,-000.

DAM.—Evansville, Ind.—Federal engineers are making a final survey for the construction of the government dam across the Ohio River a few miles below here. Estimated cost, about $1,000,000.

TELEPHONE MATERIAL.—Crystal, Ind.—The Columbia Telephone Co., Crystal, is in the market for material and equipment for the construction of a telephone plant in Dubois County. E. E. Ellis is Pres.

DITCH.—Washington, Ind.—DANIEL KUTLER has secured the contract for constructing a ditch in Daviess County.

TELEPHONE MATERIAL.—Wawaka, Ind.—The Peoples Mutual Telephone Co., Wawaka, Noble County, Ind., recently incorporated, will receive bids for material and labor for the construction and equipment of a telephone system. William Weaver, is interested.

RACE-TRACK. — Richmond, Ind. — The Richmond Driving Club is preparing to ask for bids for the construction of a mile track for training and racing purposes. Charles Hodge is Pres., and Everett Haurekatte, Secy.

CEMENT.—Ann Arbor, Mich.—The Board of Public Works will receive bids until Jan. 18 for furnishing about 15,000 bbls. of Portland cement. E. W. Graves is City Engr.

CREEK IMPROVEMENT.— Golconda, Ill.— It is proposed to organize a drainage district to improve Bay Creek. W. C. Holmes is interested.

LEVEE WORK.—East St. Louis, Ill.—A survey looking to shore protection for the proposed levee to be built by the East Side Levee and Sanitary District from Granite City, Ill., to a point south of East St. Louis, has been ordered by the Engineer Board of Review, Washington, D. C. The levee and improvement will cost $6,500,000. Henry D. Sexton is Pres., East St. Louis Levee and Sanitary Dist.

HARBOR.—Milwaukee, Wis.—The Board of Estimate has decided to appropriate $100,000 in the new budget to start the new $4,000,000 harbor project. This sum is a portion of the $250,000 authorized by the voters to acquire Jones Island. Noted on Oct. 27.

DAM.—Appleton, Wis.—The O'KEEFE-ORBISON ENGINEERING & CONSTRUCTION CO., has been awarded the contract for erecting a new dam at Combined Locks for the Combined Locks Paper Co. It will be constructed of concrete and steel, 645 ft. long, 28 ft. wide at its base and will carry a head of 19 ft. of water. It will increase the capacity of the Fox River from 1,000,000 cu. ft. per min. to 1,750,000 cu. ft. per min. The new dam will be provided with seven steel gates of the Tainter type, will provide the usual fish runways, and other appurtenances of modern structure of its kind.

DISMANTLING ORE DOCK. — Superior, Wis.—WHITNEY BROS. and W. E. HILL, Superior, have secured the contract for tearing down Dock No. 1 of the Duluth & Iron Range Ry. Co.'s ore handling system at Two Harbors. Estimated cost about $200,000. A new dock will be constructed.

DITCHES.—Webster City, Iowa.—A. J. Peterson County Audr., will receive bids until 1.30 p. m., Jan. 11, for the construction of the following ditches; Charlson Drainage District, No. 108, approximating 4,100 ft. of 8 to 24-in. tile; Miller Drainage District, No. 95, approximating 15,200 ft. of 12 to 30-in. tile; and Eppard Drainage District. No. 106 approximating 33,818 ft. of 6 to 28-in. tile.

DRAINAGE.—Des Moines, Iowa.—H. B. Frase, County Audr., will receive bids until 1 p. m., Jan. 16, for the construction of Polk Story Drainage District No. 2, including 45,-000 yds. of excavation and 27,835 ft. of 8 to 30-in. tile.

DRAINAGE WORK.—Webster City, Iowa. —The contract for the open work in the Hamilton-Story Joint Drainage District No. 1 has been awarded to the TABOR CONSTRUCTION CO., Dows, Iowa, at 9¾ cts. per cu. yd. or about $12,540. The TUSCOLA SUPPLY & CONSTRUCTION CO., Webster City, has the contract for the tile work at $32,895.

DRAINAGE.—Fort Dodge, Iowa.—J. L. Hanrahan, County Audr., will receive bids until 1.30 p. m., Jan. 13, for the construction of Drainage District No. 130 in Washington Township, about 11,930 ft. of 8 to 18-in. tile. Estimated cost, $5,401. J. G. Prosser, is Engr., Fort Dodge.

DRAIN.—Fort Dodge, Iowa.—Bids will be received until Jan. 13 by J. L. Hanrahan, County Audr., Fort Dodge, for constructing a drain in Webster County known as Drain No. 49, in Burnside and Dayton Townships, requiring 15 to 30-in. tile. Estimated cost, $28,554. G. P. Smith, Fort Dodge, is Engr.

DITCH.—Hazel, S. Dak.—The contract for the construction of a ditch in this vicinity, has been awarded to M. H. CARSTENS, Glencoe, Minn., at $11,610.

DRAINAGE.—Morrillton, Ark.—Bids have been opened for constructing a drainage system. The contract it is reported, has been awarded to the NAPPANEE DRAINAGE CO., Nappannee, Ind. Estimated cost, about $80,000.

ICE PLANT.—San Benito, Tex.—W. H. Morrison & Co., will erect a 40-ton ice plant here, to furnish ice for cars of vegetables.

HEADGATE, DAM.—Lamar, Colo. — Bids will be received by the Chivington Canal Co., Eugene C. Bell, Ch. Engr., Lamar, until 8 a. m., Jan. 10, for the construction of a reinforced concrete headgate and diversion dam at the head of the Chivington supply canal, on Big Sandy Creek, nine miles north of Brandon, on the Missouri Pacific Ry. The work calls for 600 cu. yds. of concrete.

DOCK.—Tacoma, Wash.—Designs for the proposed municipal dock have been accepted by the Municipal Commissioners. The plans call for a structure four stories high, with 100-ft. tower. Estimated cost, $120,000.

VESSEL REPAIRS.—Tacoma, Wash.—The Alaska Steamship Co., has awarded to the HEFFERNAN ENGINE WORKS, the contract to repair the vessel "Northwestern." Estimated cost, $55,000.

PIER.—Bremerton, Wash.—The contract for the construction of reinforced concrete pier No. 8 at the Puget Sound naval station has been awarded to C. F. GRAFF, 603 Crary Bldg., Seattle, Wash., at $75,000. Bids were opened on Dec. 10 by the Bureau of Yards and Docks, Navy Dept., Washington, D. C. List of bidders noted on Dec. 15.

AUTO ENGINE AND LADDER TRUCK.—Tacoma, Wash.—Bids will be received by the Commissioner of Public Safety until Jan. 16, for a motor-driven chemical engine and hose wagon, and a motor-driven aerial ladder truck.

DREDGE, ETC.—Toledo, Ore.—Bids will be received by the Port Commission, Toledo, addressed to Lee Waters, Secy., until noon, Jan. 11, for the construction of an 8-in. suction dredge, bidders to furnish plans; also for constructing a clam shell dredge according to plans and specifications filed in the office of the secretary; also for dredging of about 35,000 cu. yds. of sand and mud out of the channel in Yaquina River.

STEAMERS.—Portland, Ore.—It is reported that the Coos Bay Transportation Co., will construct two 80-ft. steamers, designed and equipped for as light draft as possible.

ROCK.—Oakland, Cal.—The Board of Public Works has awarded the contract, bids opened on Dec. 14, to the SAN FRANCISCO QUARRIES CO., for constructing the rock portion of the rock and earth embankment in the Key Route basin at $45,450 and instructed the secretary to advertise for bids for the dredging of a channel, the filling in of 400-acres of reclaimed land with the material removed, and the extension of the bulkhead line 2,000 ft. westward. The dredging of a channel 500 ft. wide and 20 ft. deep in front of the proposed wharves which the city will build will cost, according to Fred C. Turner, City Engr., $350,000.

OIL STORAGE TANK, ETC.—Fort Mason, Cal.—Bids will be received by Maj. George McK. Williamson, Constr. Q. M., U. S. A., Fort Mason, until 11 a. m., Jan. 19, for the construction of an oil storage tank, pipe line, pumps, motor, etc., at Fort Winfield Scott.

DREDGING.—San Diego, Cal.—The AMERICAN DREDGING CO., San Diego, it is reported has been awarded the contract for dredging in San Diego harbor. The contract involves the removal of 360,000 cu. yds. on the bar, giving a 600-ft. channel with 30 ft. depth at low tide; and the removal of 440,-000 yds. of the middle ground. Appropriation available, $125,000.

FILLING AND PILING.—Oakland, Cal.—The Board of Public Works has approved plans and specifications of Fred C. Turner, City Engr., for filling and piling in the Key Route basin. It is planned to reclaim more than 300 acres of water-front territory. The Key Route Commission will spend $5,000,000 for docks and wharfage along the waterfront if the plans submitted by the engineer are satisfactory.

FABRICATED STEEL, RIVETS. — Los Angeles, Cal.—Bids were received on Dec. 25 by the Board of Public Works for furnishing all fabricated steel and rivets necessary to construct 1,409 ft. of riveted steel siphon 9 ft. 6 ins. in diameter. The bids follow: Camden Iron Works, Camden, N. J., $9,400, f. o. b. cars or alongside wharf, Camden and $9,625, same delivery; East Jersey Pipe Co., $15,279, f. o. b., Paterson, N. J.; Springfield Boiler & Mfg. Co., $13,735, f. o. b., Springfield, Ill.; United Iron Works, $12,-000, f. o. b. Warren, Pa.; Power & Mining Machinery Co., $14,816, f. o. b., Cudahy, Wis.; Llewellyn Iron Works, $10,681, f. o. b., Alliance, Ohio; Scully Steel & Iron Co., $10,150, f. o. b. Chicago, Ill.; Pacific Coast Mfg. Co., $9,450, f. o. b., Pittsburg, Pa.; William B. Pollock Co., $10,725, f. o. b., Youngstown, Ohio, and $10,415 same delivery; Kennicott Co., $12,172, f. o. b., Chicago, Ill.; Struthers-Wells Co., $14,610, f. o. b., Warren, Pa.; Braun, Williams & Russell, Inc., $10,400, f. o. b., Sharon, Pa.; Wildman Boiler Works, $9,990, f. o. b., Chicago, Ill.; Riter-Conley Mfg. Co., $9,930, f. o. b. Pittsburg, Pa., and $10,315 same delivery; Shaw-Batcher Pipe Works, $13,250, f. o. b., Sacramento, Cal. H. B. Ferris, is Secy.

EXTENSION OF WHARF.—Shigawake, Que.—R. C. Desrochers, Secy., Dept. Pub. Wks., Ottawa, Ont., will receive bids until Jan. 18 for the construction of extension to the wharf here.

DRYDOCK.—Montreal, Que.—A large drydock, it is reported, will be erected here during the coming year. C. C. Ballatyne of the Montreal Harbor Board is interested.

DREDGING.—Fort William, Ont.—The Dominion Government has planned a large amount of dredging for this port for 1911. Address R. C. Desrochers, Secy. Dept. Pub. Works, Ottawa, Ont.

STEAMER.—Ottawa, Ont.—The contract for the construction of the new government steamer, "Earl Grey," has been let to VICKERS SON & MAXIM, at $515,000.

BREAKWATER. — Fort Burwell, Ont. — Bids will be received until 4 p. m., Jan. 30, by R. C. Desrochers, Secy. Dept. Pub Wks., Ottawa, Ont., for the construction of a breakwater at Port Burwell.

POLES.—Summit Lake, B. C.—The SUMMIT LAKE LUMBER CO., has been awarded a contract for supplying 50,000 poles to Lidsay Bros., Spokane, Wash., to be delivered during 1911.

STEEL BARGE.—Nelson, B. C.—The Canadian Pacific Ry. Co., has authorized the immediate construction of a steel barge for the Kootenay Lake service capable of handling 15 loaded steel cars at one time. Address Capt. J. C. Gore, Nelson, B. C.

TELEPHONE PLANT ADDITIONS.—Vancouver, B. C.—The British Columbia Telephone Co. will make extensive additions, and alterations will be made immediately to the company's plant and exchanges at Nelson and Kamloops, B. C. George H. Hulse is Gen. Mgr., Vancouver.

ROAD ROLLER.—Vancouver, B. C.—Bids will be received until Feb. 7, by William McQueen, City Clk., for a road roller, weighing 15 tons.

WHARF.—Leitche's Creek, N. S.—Bids will be received by R. C. Desrochers Secretary, Dept. Pub. Wks., Ottawa, Ont., until Jan. 16, for the construction of a wharf here.

OIL STORAGE TANKS.—Tampico, Mex.—The Huastoca Petroleum Co., a subsidiary of the Mexican Petroleum Co., Los Angeles, Col., will erect three oil storage tanks, one at Tampico, with a capacity of about 1,000,-000 bbls of oil; another at Juan Casiano, and the third at San Geronimo, the combined capacity of these two to be about 600,-000 bbls. This company recently finished the laying of an oil pipe line from the Juan Casiano field to Tampico, 110 miles, and is delivering oil through the line at the rate of about 25,000 bbls. per day. On the route of this pipe line were erected four pumping stations, each plant costing about $100,000. The same company owns a concession from the federal government for the construction of an oil pipe line from its oil fields in the Gulf coast region to the City of Mexico, a distance of several hundred miles. It is now obtaining the right of way for the proposed pipe line, preparatory to starting construction work.

U. S. POSSESSIONS.

STEEL.—Panama.—Bids were received, on Dec. 27, as follows by the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., for furnishing 2,320,000 lbs. of corrugated mechanical bar steel: Belmont Iron Works, Philadelphia, $39,511; Concrete Steel Co., 29 Broadway, New York, $34,761; Corrugated Bar Co., St. Louis, $37,-065; John A. Crowley & Co., New York, $37,870; Crucible Steel Co. of America, Pittsburg, $44,351; General Fireproofing Co., Youngstown, Ohio, $42,734; J. B. Kendall & Co., Washington, $36,356; Trussed Concrete Steel Co., Detroit, Mich., $35,777.

LUMBER.—Panama.—Bids were received as follows, on Dec. 27, by the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., for furnishing 3,378,640 ft., B. M., of lumber, long-leaf yellow pine, or Douglas fir, pine to be delivered at Colon and fir at Port of Ancon: A. S. Bacon & Sons, Savannah, Ga., $84,466; Balfour, Guthrie & Co., Portland, Ore., $70,262 (Ancon); Chicago Lumber & Coal Co., St. Louis, $72,-673; G. Elias & Bro., Buffalo, N. Y., $80,984; Ensign Lumber Co., Jacksonville, Fla., $69,-827 ($67,505, if awarded entire contract); William D. Gill & Sons, Baltimore, Md., $92,574; D. L. Gillespie & Co., Pittsburg, $76,070; Gress Mfg. Co., New York, $68,849; J. K. Joice, Chicago, $72,269; Netalbany Lumber Co., Hammond, La., $79,084; Bayshore Lumber Co., Mobile, Ala., $70,884; Dixon Lumber Co., Savannah, $82,091; W. R. Grace & Co., San Francisco, $67,502 (Ancon). Bids on yellow pine, delivered at Colon, unless otherwise stated.

FILTER PLANT, ETC. — Panama. — According to the Ancon, Canal Zone, "Canal Record," the detailed construction drawings for the sedimentation basin, filter plant and clear-water well, which has been authorized for installation in connection with the new Agua Clara water-works, are nearly completed, and requisitions for controllers, valves, pipes and other operating parts will go forward in the near future. The filters are to be what is known as the "rapid-gravity" type, and are designed to deliver a daily output of 2,500,000 gallons of filtered water when three of the four beds are in service. Each of the four beds will be approximately 17 ft. square, giving a rate of filtration equivalent to 100,000,000 gallons per 24 hours per acre. The coagulation basin will be about 75 ft. square, divided into four compartments and of such capacity as will give sedimentation of about three hours' duration. The filtered water will pass by gravity from the controllers through the filters to a covered clear-water well having a capacity of about 225,000 gallons. From this well the water will be pumped by the new electrical pump recently installed to a 400,-000-gallon storage tank at Gatun.

MACHINERY FOR GATE VALVES, ETC. —Panama.—Bids will be received until 10.30 a. m., Feb. 25, by the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., for the machinery to operate the Stoney gate valves and cylinirical valves in the locks at Gatun, Pedro Miguel and Miraflores. Bids on this machinery will be asked both in Europe and in the United States. There will be required 116 [illegible] motors and limit switches for operating the Stoney gate valves, and 120 machines and limit switches for operating the cylindrical valves. Tests of the type to be used are being made at Gatun and Pedro Miguel. The Stoney gate valves are used for letting the water into and out of the lock culverts or tunnels. The machinery for which bids are to be asked will consist of a rising valve stem fastened to the valve at the lower end and to a guided crosshead at the upper end. The crosshead will move vertically through a distance of [illegible] by means of two vertical revolving screws which transmit the pull through [illegible] revolving nuts in the crosshead. Each will be driven from the motor shaft through gear and pinion reduction and bevel gears. The 78-in. cylindrical valves [illegible] the water from the main culvert of the center wall of the locks into the lateral culverts, of vice versa. The machinery for operating them will consist of a guided rising stem fastened at its lower end to the cylindrical valve and having a non-revolving nut fastened to its upper end. This nut, valve and valve stem is moved vertically through a distance of three feet by means of a revolving screw, the end thrust being taken up by a roller-bearing at the upper end of the screw. The screw is actuated by a bevel gear which is driven by a pinion on the motor shaft. The motors for operating the machinery will be induction, totally inclosed, moistureproof, squirrel-cage, steel mill type, high torque, designed for a 25-cycle, 220-volt system. It is the desire of the Commission to purchase motors which have been developed and successfully used in the operation of steel rolling mills for a period of at least one year, such service being comparable with that which will be required on the lock valves. Tests will be made on the Isthmus to ascertain whether the motors furnished are fit to stand the effects of the moisture, and to this end the Commission may buy a sample of any, or all, of the motors offered. All of the above apparatus will be installed by the Commission. The time of delivery extends over a period of about two years, in order that the material may be on hand when the completion of successive parts of the concrete will permit its erection.

FOREIGN CONTRACTS.

(To insure prompt attention, letters on consular business should be addressed to the American Consul at ————, ————. Such letters are opened and attended to by whoever may be in charge of the office. If addressed to the consul, personally, letters are forwarded to him, unopened, should he be absent, and a delay thus intervenes.

If, in the meantime, he should have gone out of office, the matter may wholly escape attention.)

BATTLESHIPS.—Chili.—Bids for the construction of two new battleships for the Chilian government will be opened in London, England, on Jan. 10.

DREDGER.—England.—Bids will be received by the Tyne Improvement Commissioners, Bewick St., Newcastle-upon-Tyne, England, until Jan. 17, for a dredger.

BATTLESHIP.—England.—It is reported that the government has awarded the contract for the construction of a 24,000-ton battleship, speed 21 knots, to SCOTT & CO., Greenock, Scotland.

CRUISER.—China.—The Chinese Government has awarded the contract, it is reported to the NEW YORK SHIPBUILDING CO., Camden, N. J., for the constructioin of a training cruiser of 2,500 tons.

ELECTRICAL PUMPING MACHINERY.—Australia.—Bids are asked by the Minister of Public Works of Western Australia, The Contractor's Room, Public Works Office, Perth, Western Australia, until Feb. 28, for electrical pumping machinery.

SCHOOL-HOUSE.—Santo Domingo. — The City of Monte Cristi, it is reported, will construct a school-house and other buildings of metal lath, stucco and beaver board, and desires quotations f. o. b. steamer, New York. The city will also be in the market soon for vitrified sewer pipe. Address John S. Eveline, Monte Cristi, Santo Domingo.

PUMP AND BOILER REPAIRS, ETC.—Chile.—Bids will be received until Jan. 24 by the Superintendent of Customs, Valparaiso, Chile, for renovating the motive power, pumps and boilers of the hydraulic plant at the custom-house and of the elevators in the storerooms of the custom-house and naval arsenal at Valparaiso.

STEAM DREDGER.—Australia.—Bids will be received by the Melbourne Harbor Trust Commissioners until 11 a. m., Jan. 17, for the supply and delivery at the Port of Melbourne of one single-screw barge-loading bucket dredger; capacity, 1,000 tons per hour. Payments, one-half when dredger sails for Melbourne; one-half on final completion of contract. Bids will be received by cable. A copy of specifications and conditions of contract can be obtained from Mr. James Stewart, M. L. N. A., Proctor House, Newscastle-on-Tyne, England.

HARBOR WORK.—Germany.—According to the Bellingham, Wash., "Herald," the authorities of the city of Hamburg will spend $50,000,000 during the next four years in deepening the channels of the River Elbe and constructing new docks and railroad connecting branches. Several of the existing docks which now only accommodate river craft are to be deepened for seagoing ships, and quay space will be cleared for the erection of miles of new warehouses.

The main channel of the Elbe below Hamburg is to be deepened to 33 ft. and to be made a minimum width of 1,233 ft. The connection of the new basins requires a large number of drawbridges and tunnelling under the river bed. The works at the Kohlbrand branch of the Elbe River are in Prussian territory, but with the consent of the Bundesrath they will be included in the Hamburg Free Harbor District. The existing customs line will be pushed back to the west, being marked by a string of barges.

CONTRACT PRICES.

(*Denotes that *this work is advertised in Engineering News.*)

BARGE CANAL.—Albany, N. Y.—The item prices of the bids received by F. C. Stevens, Supt. Pub. Wks., Dec. 20, for Barge Canal Contract No. 80, providing for the construction of a dam and bulkhead across the Oswego River at Phoenix, were: (A) Engineer's estimate; (B) W. J. Burns Co., Syracuse, N. Y.; (C) Scott Bros., Rome, N. Y.; (D) WALTER BRADLEY, Fulton, N. Y., (awarded contract):

BARGE CANAL CONTRACT NO. 80.

	A	B	C	D
[illegible] cu. yds. excavation	$1.50	$1.75	$1.80	$1.50
[illegible] cu. yds. forming embankment	.15	.15	.15	.15
[illegible] M. ft. B.M. sawed lumber (Y. P. or D. F.)	55.00	55.00	55.00	55.00
[illegible] M. ft. B.M. sawed lumber (white oak)	100.00	100.00	120.00	100.00
[illegible] cu. yds. second-class concrete	7.50	8.50	7.80	6.86
[illegible] lbs. metal reinforcement	.04	.04	.04	.03
[illegible] lbs. metal in head gates	.055	.055	.06	.05
[illegible] lbs. metal in valves	.07	.07	.07	.07
[illegible] lbs. metal in taintor gates	.065	.065	.07	.06
[illegible] gate hoists, Class A, each	800.00	800.00	825.00	450.00
[illegible] gate hoists, Class B, each	600.00	600.00	625.00	350.00
Removing old steel in bulkheads, lump sum	100.00	100.00	100.00	100.00
Coffer-dams, pumping, bailing & draining, lump sum	25,000.00	30,000.00	30,000.00	22,500.00
Totals	$134,340	$147,556	$146,604	$117,391

BARGE CANAL.—Albany, N. Y.—The item prices of the bids received by F. C. Stevens, Supt. Pub. Wks., Dec. 21, for Barge Canal Contract No. 91, providing for building and equipping a hydro-electric power plant on the Erie Canal, near the east end of the Crescent dam, were: (A) Engineer's estimate; (B) John W. Flynn, Waterford, N. Y.; (C) D'Olier Engineering Co., Philadelphia, Pa.; (D) Brown & Lowe, Schenectady, N. Y.; (E) WELLS, BOUGHTON & CO., Troy, N. Y. (awarded contract).

BARGE CANAL CONTRACT NO. 91.

	A	B	C	D	E
[illegible] cu. yds. excavation	$1.00	$1.00	$1.20	$1.25	$1.20
210 cu. yds. first-class concrete	12.00	12.00	12.00	13.50	11.00
570 cu. yds. second-class concrete	8.00	8.00	9.50	9.50	9.00
145 cu. yds. first-class reinforced concrete	20.00	18.00	24.00	22.50	15.00
53,200 lbs. structural steel	.07	.07	.08	.085	.06
9,300 lbs. metal reinforcement	.065	.05	.06	.08	.04
18,400 lbs. iron castings, machined	.05	.05	.05	.065	.04
15 lin. ft. wrought-iron pipe railing	1.00	1.00	1.00	2.00	1.00
1,700 sq. ft. roofing	.07	.07	.084	.075	.07
410 sq. yds. painting	.20	.20	.20	.45	.20
Electric equipment, lump sum	12,600.00	12,600.00	15,100.00	14,750.00	12,600.00
Governors, lump sum	5,600.00	5,600.00	5,600.00	5,800.00	5,600.00
Traveling crane, lump sum	400.00	400.00	400.00	950.00	400.00
Turbine machinery & valves, lump sum	5,275.00	5,200.00	5,275.00	7,000.00	5,275.00
Doors, windows & woodwork, lump sum	450.00	450.00	450.00	850.00	450.00
Polish brass railing & bronze eye bolts, lump sum	60.50	60.00	60.20	100.00	60.50
Miscellaneous accessories, lump sum	800.00	800.00	800.00	800.00	800.00
Lavatory equipment, lump sum	200.00	200.00	200.00	350.00	200.00
Coffer-dams, pumping, bailing & draining, lump sum	2,000.00	1,500.00	4,500.00	3,500.00	1,300.00
Totals	$44,600	$43,595	$51,898	$54,629	$42,941

BARGE CANAL.—Albany, N. Y.—The item prices of the bids received by F. C. Stevens, Supt. Pub. Wks., Dec. 20, for Barge Canal Contract No. 48, providing for the construction of 5.75 miles of Erie canal between Lyons and East Newark, were: (A) Engineer's estimate; (B) M. A. Talbott Co., Baltimore, Md.; (C) S. Pearson & Son, Inc., 507 Fifth Ave., New York, N. Y.; (D) CROWELL-SHERMAN-STALTER CO., Cleveland, Ohio (awarded contract).

BARGE CANAL CONTRACT NO. 48.

	A	B	C	D
67 acres clearing (per acre)	$25.00	$25.00	$25.00	$25.00
2,002,500 cu. yds. excavation	.45	.49	.50	.48
193 M. ft. B. M. sheeting and Bracing (first quality)	40.00	45.00	40.00	40.00
229 M. ft. B. M. sheeting and bracing (second quality)	20.00	20.00	20.00	20.00
276,000 cu. yds. forming embankment	.15	.15	.15	.15
600 cu. yds. lining	1.25	1.25	1.25	1.25
950 cu. yds. puddle	1.25	1.25	1.25	1.25
32 M. ft. B. M. sawed lumber (Y.PorD.F.)	55.00	55.00	55.00	55.00
27 M. ft. B. M. sawed lumber (hemlock)	50.00	50.00	50.00	50.00
15.7 M. ft. B. M. sawed lumber (white oak)	100.00	100.00	100.00	100.00
360 lin. ft. round timber in cribs	.15	.15	.15	.15
340 cu. yds. stone filling in cribs	1.50	1.50	1.50	1.50
38,500 lin. ft. foundation piles (12′ to 30′ long)	.25	.25	.25	.25
220 lin. ft. mooring piles, 20′ long	.35	.35	.35	.35
167 M. ft. B. M. wooden sheet piling	50.00	50.00	50.00	50.00
175 cu. yds. first-class concrete	8.00	9.60	8.00	8.00
59,140 cu. yds. second-class concrete	7.00	7.00	7.90	7.25
580 cu. yds. reinforced concrete	12.00	12.00	12.00	12.00
4.7 cu. yds. 1st-class msnry, bridge coping	30.00	30.00	30.00	30.00
30,100 cu. yds. wash wall	2.25	2.50	2.25	2.25
80 sq. yds. first-class stone paving	1.75	1.75	1.75	1.75
1,950 sq. yds. second-class stone paving	1.25	1.25	1.25	1.25
950 cu. yds. second-class riprap	2.50	2.50	2.50	2.50
76 cu. yds. third-class riprap	2.25	2.25	2.25	2.25
24,000 sq. ft. steel piling, first quality	1.00	1.20	1.00	1.00
120,000 sq. ft. steel piling, second quality	.20	.20	.20	.20
430 lbs. bronze castings	.50	.60	.50	.50
408,200 lbs. structural steel	.05	.05	.05	.05
85,300 lbs. metal reinforcement	.03½	.035	.035	.035
4,400 lbs. wrought iron	.04	.04	.04	.04
3,300 lbs. steel castings	.05	.05	.05	.05
25,000 lbs. iron castings, plain	.03½	.035	.035	.035
18,800 lbs. iron castings, machined	.05	.05	.05	.05
1,720 sq. ft. Portland cement sidewalks	.15	.15	.15	.15
330 sq. yds. wood block pavement	2.75	2.75	2.75	2.75
160 lin. ft. stone curbs	.60	.60	.60	.60
270 lin. ft. resetting stone curbs	.10	.10	.10	.10
34 sq. yds. Medina sandstone pavement	1.50	1.50	1.50	1.50
290 sq. yds. macadam pavement	.60	.60	.60	.60
400 sq. yds. relaying Medina sandstone pavement	.20	.20	.20	.20
280 sq. yds. wooden pavement	2.75	2.75	2.75	2.75
1,240 lin. ft. wooden fence	.20	.20	.20	.20
600 lin. ft. wrought-iron pipe railing	1.00	1.00	1.00	1.00
320 lin. ft. lattice railing	1.75	1.75	1.75	1.75
438,000 lbs. metal in lock gates	.05½	.055	.055	.055
173,000 lbs. metal in buffer beams	.05½	.055	.055	.055
68,500 lbs. metal in lock valves	.09	.09	.09	.09
30,000 lbs. metal in sluice gates	.06	.06	.06	.06
1,170 sq. ft. concrete steel roofing and man-hole covers	.35	.35	.35	.35
450 sq. ft. water-proofing	.30	.36	.30	.30
2 M. building brick	18.00	18.00	18.00	18.00
3 gate hoists, light, complete in place (each)	100.00	100.00	100.00	100.00
Windows and doors for power-house (lump sum)	250.00	250.00	250.00	250.00
Maintaining highway traffic (lump sum)	1,500.00	1,500.00	1,500.00	1,500.00
Maintaining navigation (lump sum)	1,000.00	1,000.00	1,000.00	1,000.00
For removing 24 buildings (each)	90.00	90.00	90.00	90.00
Cofferdams, pumping, bailing and draining (lump sum)	24,000.00	28,600.00	23,950.00	24,000.00
Deduct price for bridge superstructures	50.00	50.00	50.00	50.00
Totals	**$1,626,812**	**$1,725,152**	**$1,780,113**	**$1,701,671**

BARGE CANAL.—Albany, N. Y.—The item prices of the only bid received by F. C. Stevens, Supt. Pub. Wks., Dec. 20, for Barge Canal Contract No. 76, providing for the construction of the canal from East Newark to a point one-half mile east of Port Gibson, a distance of 5.77 miles, were: (A) Engineer's estimate; (B) T. A. GILLESPIE COMPANY, 50 Church St., New York, N. Y. (awarded contract).

BARGE CANAL CONTRACT NO. 76.

	A	B
Clearing (lump sum)	$100.00	$115.00
2,150,200 cu. yds. excavation	.50	.47
98 M. ft. B. M. sheeting and bracing, first quality	40.00	47.00
95 M. ft. B. M. sheeting & bracing second quality	20.00	23.00
179,700 cu. yds. forming embankment	.15	.17
1,120 cu. yds. lining	1.25	1.45
12.4 M. ft. B. M. sawed lumber (Y. P. or D. F.)	55.00	65.00
7 M. ft. B. M. sawed lumber (white oak)	100.00	115.00
1,650 lin. ft. foundation piles	.25	.29
350 lin. ft. mooring piles	.35	.40
27.6 M. ft. B. M. wooden sheet piling	50.00	59.00
7,660 sq. ft. steel piling, first quality	1.00	1.18
32,330 sq. ft. steel piling second quality	.20	.22
35,850 cu. yds. second-class concrete	7.00	8.30
145 cu. yds. reinforced concrete	12.00	14.00
14 cu. yds. first-class masonry bridge coping	30.00	35.00
29,500 cu. yds. wash wall	2.25	2.25
100 sq. yds. first-class stone paving	1.75	2.00
600 sq. yds. second-class stone paving	1.25	1.40
130 cu. yds. second-class riprap	2.50	2.70
560 lin. ft. 10-in. vit. pipe, laid	.50	.55
32,800 lbs. structural steel	.05	.0575
37,900 lbs. metal reinforcement	.03½	.04
18,100 lbs. iron castings, plain	.03½	.04
6,900 lbs. iron castings, machined	.05	.055
10,980 sq. ft. Portland cement sidewalks	.15	.17
2,070 lin. ft. stone curbs	.60	.60
400 sq. yds. cobblestone paving	1.00	.80
3,400 sq. yds. macadam pavement	.60	.70
820 sq. yds. brick pavement	2.00	2.30
3,170 lin. ft. wooden fence	.20	.20
198,000 lbs. metal in lock gates	.055	.065
85,000 lbs. metal in buffer beams	.055	.065
25,000 lbs. metal in lock valves	.09	.105
1 sluice gate, 5′ × 7′, complete in place	700.00	800.00
For maintaining highway traffic (lump sum)	1,700.00	1,700.00
For maintaining navigation (lump sum)	2,000.00	2,000.00
For removing old bridge superstructures (lump sum)	1,000.00	1,000.00
Cofferdams, pumping, bailing and draining (lump sum)	18,000.00	12,000.00
For removing 84 buildings (each)	50.00	58.00
Totals	$1,504,776	$1,494,057

BARGE CANAL.—Albany, N. Y.—The item prices of the single bid received by F. C. Stevens, Supt. Pub. Wks., on Dec. 20, for Barge Canal Contract No. 77, providing for the construction of the canal from a point east of Port Gibson to a point one-half mile west of Palmyra, a distance of 6.78 miles, were: (A) Engineer's estimate; (B) T. A. GILLESPIE CO., 50 Church St., New York, N. Y., (awarded contract):

BARGE CANAL CONTRACT NO. 77.

	A	B
70 acres, clearing	$25.00	$25.00
2,657,980 cu. yds. excavation	.45	.38
44 M. ft. B.M. sheeting and bracing	50.00	50.00
222,300 cu. yds. forming embankment	.15	.17
1,470 cu.yds. lining	1.50	1.40
24 M. ft. B.M. sawed lumber (Y. P. or D. F.)	55.00	65.00
3 M. ft. B.M. sawed lumber (hemlock)	40.00	40.00
7.6 M. ft. B.M. sawed lumber (white oak)	100.00	115.00
35,500 lin. ft. foundation piles	.25	.25
400 lin. ft. mooring piles	.30	.35
71 M. ft. B.M. wooden sheet piling	50.00	59.00
43,930 cu. yds. second-class concrete	7.00	8.00
390 cu. yds. reinforced concrete	12.00	14.00
11 cu. yds. first-class masonry bridge coping	30.00	35.00
47,500 cu. yds. wash wall	2.50	2.25
70 sq. yds. first-class stone paving	2.00	2.00
940 sq. yds. second-class stone paving	1.50	1.40
150 cu. yds. second-class rip-rap	2.75	2.70
1,460 cu. yds. third-class rip-rap	2.50	2.40
693,800 lbs. structural steel	.05	.0575
54,700 lbs. metal reinforcement	.035	.04
3,300 lbs. steel castings	.045	.05
13,200 lbs. iron castings, plain	.035	.04
8,600 lbs. iron castings, machined	.05	.055
3,430 sq. ft. Portland cement sidewalks	.20	.21
1,800 lin. ft. stone curbs	.50	.50
480 sq. yds. paved gutters	1.00	1.00
2,230 sq. yds. macadam pavement	.60	.70
1,380 sq. yds. wooden pavement, 3¾-in. thick	3.00	3.50
6,700 lin. ft. wooden fence	.20	.20
420 lin. ft. lattice railings	1.75	1.50
206,000 lbs. metal in lock gates	.055	.065
34,000 lbs. metal in lock valves	.09	.105
86,000 lbs. metal in buffer beams	.055	.065
264,000 lbs. metal in guard gates	.055	.055
For removing old bridge superstructure at Maple Ave., lump sum	100.00	100.00
For maintaining highway traffic, lump sum	2,500.00	2,500.00
3 sluice gates, 36-in. × 60-in., with machinery complete in place, each	600.00	700.00
3 sluice gates, 60-in. × 84-in., with machinery complete in place, each	700.00	800.00
For maintaining navigation, lump sum	5,000.00	3,000.00
For coffer-dams, pumping, bailing & draining, lump sum	10,000.00	11,000.00
21 buildings to be removed, each	50.00	55.00
Totals	$790,673	$1,652,148

SEWAGE DISPOSAL WORKS.—Atlanta, Ga.—Bids were received Dec. 12 by the city for the Peachtree Creek Disposal Works from: (A) Nichols Construction Co., Atlanta, Ga.; (B) Piedmont Construction Co., Atlanta, Ga.; (C) Hard & Worm, New York, N. Y.; (D) CHESTER A. DADY, New York (awarded contract); (E) Municipal Engineering & Constructing Co., Chattanooga, Tenn. The itemized bids were as follows:

SEWAGE DISPOSAL WORKS, ATLANTA, GA.

	A	B	C	D	E
30,000 cu. yds. earth excavation	$0.32	$0.35	$0.476	$0.73	$0.50
8,000 cu. yds. rolled embankment	.50	.50	.365	.30	.55
2,000 cu. yds. rock excavation	1.00	2.00	.80	1.00	2.40
Grit chamber	....	....	....	....	....
Settling tanks	....	....	....	....	....
Roughing filters	....	....	....	....	....
Machine screen house	....	....	....	....	....
Closing tanks	....	....	....	....	....
Sprinkling filters	....	....	....	....	....
Sludge bed	....	....	....	....	....
350 lin. ft. 48-in. pipe	7.00	4.25	5.03	5.30	4.70
950 lin. ft. 42-in. pipe	5.50	4.00	4.20	4.50	3.96
50 lin. ft. 36-in. pipe	4.00	3.00	3.86	3.50	3.40
200 lin. ft. 30-in. pipe	3.00	2.00	2.99	3.00	2.76
550 lin. ft. 24-in. pipe	2.00	1.00	1.78	2.50	2.10
900 lin. ft. 8-in. pipe	.20	.20	.23	.25	.25
100 lin. ft. 6-in. pipe	.20	.15	.16	.20	.18
100 cu. yds. extra concrete	10.00	8.00	12.00	5.00	10.00
5,000 lbs. extra steel	.04	.025	.044	.05	.04
Laboratory building	2,734.70	3,000.00	2,800.00	2,000.00	1,970.00
Totals	**$235,646**	**$208,658**	**$208,106**	**$195,363**	**$247,344**

DIVERSION WORK.—Klamath Falls, Ore. —Bids were received Dec. 15 by the U. S. Reclamation Service, Portland, Ore., for the construction of the Lost River diversion works, from (A) GEO. C. CLARK, Everett, Wash. (awarded contract); (B) McGrath Construction Co., Green Bay, Wis.; (C) Strange & McGuire, Salt Lake City, Utah. The itemized bids were as follows:

DIVERSION WORKS—KLAMATH FALLS, ORE.

	A.	B.	C.
15,000 cu. yds. excavation above station 4067 (class 1)..	$0.54	$0.70	$0.40
2,300 cu. yds. excavation above station 4067 (class 2)..	.99	.80	1.45
500 cu. yds. excavation above station 4067 (class 3)..	1.83	1.00	2.10
2,500 cu. yds. excavation below station 4067 (class A).	1.50	1.00	1.75
500 cu. yds. excavation below station 4067 (class B).	1.83	1.25	3.00
15,000 cu. yds. embankment..........	.36	.24	.45
5,300 cu. yds. concrete..........	10.05	16.25	13.00
200,000 lbs. reinforced steel..........	.015	.0075	.0275
50,000 lbs. structural steel..........	.015	.01	.035
1,000 cu. yds. stone paving..........	4.06	3.50	3.50
27,000 lin. ft. B. M. pool flooring..........	40.00	40.00	40.00
Totals..........	$83,512	$112,270	$103,740

EXAMINATIONS.

ASSISTANT ENGINEER.—New York, N. Y.—An examination will be held Feb. 3 for the position of Assistant Engineer, Bureau of Buildings, Grades D and E. Application must be made before Jan. 6. The subjects and weights of the examination are as follows: Technical, 5 points; experience, 3 points; mathematics, 1 point; report, 1 point. There are three vacancies in the Bureau of Buildings, at $2,400 per annum, and six at $1,800 per annum. Minimum age for $1,800 grade, 21 years; minimum age for $2,400 grade, 25 years. Frank A. Spencer, Secy., Municipal Civil Service Comrs., 299 Broadway, New York, N. Y.

ASSISTANT ENGINEER.—New York, N. Y.—Applications will be received until 5 p. m., Jan. 6, for the position of assistant engineer, Bureau of Buildings (grades D & E). The examination will be held ..., at 10 a. m. The subjects and weights ... Technical, 5; experience, 3; mathe... 1; report, 1. 75% required on techn... paper and 70% on all. Candidates must ... engineers of at least three years' experience (Chapter 386 of the Charter ... City of New York). Candidates should ... familiar with the best modern practice ... structural details of important buildings ... construction and have a knowledge of ... fundamental requirements of the Building ... They should have had experience in ... executive control of a number of technical employes and general business relations ... non-technical men. Vacancies: Three ... Bureau of Buildings at $2,400 a year, and ... $1,800 a year. The minimum age, 2... F. A. Spencer is Secy., 299 Broadway ... York, N. Y.

ASSISTANT IN TOBACCO INVESTIGATIONS.—Washington, D. C.—The ... Civil Service Commission announces ... examination on Jan. 28, to secure eligibles from which to make certification to ... four vacancies in the position of Assistant in Tobacco Investigations, at salaries ... ranging from $900 to $1,620 a year, in the Bureau of Plant Industry, Department of Agriculture, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill ... vacancies by reinstatement, transfer, ... promotion. The examination will consist of the subjects mentioned below, weighted as indicated: General education and training, with special reference to work in botany, zoology, and general agriculture, 25 points; experience in agricultural investigations and publications, 25 points; experience in growing, curing, handling, and manufacturing tobacco, 50 points. Applicants must have reached their 20th birthday. Examination form 304 and special form.

ASSISTANT CLASSIFIER. — Washington, D. C.—The U. S. Civil Service Commission announces an examination on Feb. 7-8, to secure eligibles from which to make certification to fill vacancies as they may occur in the positions of Classification Assistant and Assistant Classifier in the Geological Survey, at salaries ranging from $900 to $1,620 a year, unless it shall be decided in the interest of the service to fill such vacancies by reinstatement, transfer, or promotion. The Department estimates that two appointments will be made at an early date as a result of this examination, the salary depending upon the experience and qualifications of the eligibles secured. The examination will consist of the subjects mentioned below, weighted as indicated: Mathematics, 15 points; topography, 15 points; geology, 20 points; English 10 points; drafting rated on drawings in topography and geology, and on preparation of classification plat from data given, 10 points; training and experience, 30 points. Applicants must have reached their 20th birthday. Examination form 1312.

PREPARATOR, DIVISION OF TECHNOLOGY.—The U. S. Civil Service Commission announces an examination on Feb. 8, to secure eligibles from which to make certification to fill vacancies in the following positions in the U. S. National Museum, Washington, D. C., and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancies by reinstatement, transfer, or promotion. Salary, $70 a month. Applicants must have reached their 20th, but not their 30th birthday. The duties in this position consists principally of cleaning, preparing, and installing for public exhibition electrical apparatus and machinery, talking machines, writing machines, civil engineering instruments, firearms, watches, clocks, and other timekeeping devices, and of objects illustrating the history of the development of land and water transportation and aerial navigation. The examination for the above-named position will consist of the subjects mentioned below, weighted as indicated: Spelling, 10 points; arithmetic, 10 points; letter-writing, 10 points; penmanship, 10 points; copying from plain copy, 10 points; training and experience, 50 points. Examination form 1800.

BARGE CANAL.—Albany, N. Y.—The item prices of the bids received by F. C. Stevens, Supt. Pub. Wks., on Dec. 20, for Barge Canal Contract No. 51, providing for the construction of a canal feeder between Trenton Falls and Nine Mile Creek, near Utica, a distance of 5.75 miles, were: (A) Engineer's estimate; (B) Lane Bros. Co., Altavista, Va.; (C) GEORGE T. CUNNINGHAM, Utica, N. Y. (awarded contract); (D) Joseph F. Stabell Co., Buffalo, N. Y.; (E) Schnable & Quinn, 1037 Stock Exchange, Chicago, Ill.; (F) Baker & Banker, Herkimer, N. Y.; (G) Barge Canal Construction Co., 105 Nassau St., New York; (H) Coast & Interior Contracting Co., Fayetteville, N. Y.:

BARGE CANAL CONTRACT NO. 51.

	A.	B.	C.	D.	E.	F.	G.	H.
Clearing, lump sum..........	$200.00	$200.00	$200.00	$200.00	$200.00	$240.00	$240.00	$200.00
517,500 cu. yds. excavation..........	.50	.45	.47	.45	.48	.5825	.49	.46
112 M. ft. B. M. sheeting and bracing..........	55.00	55.00	40.00	55.00	50.00	65.00	55.00	45.00
3,000 lin. ft. round timber bracing..........	.20	.20	.15	.20	.20	.20	.20	.15
93,000 cu. yds. forming embankment..........	.15	.15	.14	.14	.15	.18	.15	.15
800 cu. yds. lining..........	1.25	1.25	1.20	1.25	1.25	1.50	1.50	1.25
100 cu. yds. puddle..........	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.00
M. ft. B. M. sawed lumber..........	55.00	55.00	45.00	55.00	55.00	65.00	55.00	55.00
6,500 lin. ft. foundation piles..........	.40	.40	.30	.40	.40	.45	.40	.40
20 M. ft. B. M. wooden sheet piling..........	55.00	55.00	45.00	55.00	55.00	65.00	55.00	55.00
1,000 sq. ft. steel-sheet piling..........	2.00	2.00	1.80	2.00	2.00	2.40	2.00	2.00
3,660 cu. yds. second-class concrete..........	8.00	8.00	7.50	8.00	7.10	9.60	9.60	8.00
960 cu. yds. reinforced concrete..........	12.00	12.00	11.00	12.00	11.00	14.40	14.40	12.00
4,750 cu. yds. second-class concrete lining..........	7.00	7.00	6.75	7.00	6.60	8.40	8.40	6.50
2,900 cu. yds. dry retaining wall..........	3.50	3.50	2.25	3.50	3.50	4.20	3.50	3.50
5,000 cu. yds. wash wall..........	2.00	2.00	1.60	2.00	2.00	2.40	2.00	2.00
420 sq. yds. second-class stone paving..........	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.00
60 sq. yds. third-class stone paving..........	1.75	1.75	1.75	1.75	1.75	2.10	2.10	1.75
2,000 sq. yds. cobble stone paving..........	1.00	1.00	.90	1.00	1.00	1.20	1.20	1.00
40 cu. yds. first-class riprap..........	2.75	2.75	2.75	2.75	2.75	3.30	3.30	2.75
1,140 cu. yds. second-class riprap..........	2.50	2.50	2.50	2.50	2.50	3.00	3.00	2.50
120 cu. yds. third-class riprap..........	2.25	2.25	2.00	2.25	2.25	2.70	2.70	2.25
2,100 cu. yds. fourth-class riprap..........	2.00	2.00	1.50	2.00	2.00	2.40	2.40	2.00
10,400 cu. yds. rock spoil protection..........	1.00	1.00	.80	1.00	.50	1.20	1.00	1.00
109,000 lbs. cast-iron pipe and specials..........	.03	.03	.0280	.03	.03	.035	.03	.03
40 lin. ft. 12-in. vitrified pipe and specials....	.50	.50	.50	.50	.50	.60	.50	.50
7,900 lin. ft. 6-in. vitrified pipe and specials....	.25	.25	.25	.25	.25	.30	.25	.25
9,700 lbs. structural steel..........	.05	.05	.05	.05	.05	.06	.05	.05
36,400 lbs. metal reinforcement..........	.035	.035	.03	.035	.035	.04	.035	.035
1,800 lbs. iron castings, plain..........	.035	.035	.035	.035	.035	.04	.035	.035
8,600 lbs. iron castings, machined..........	.05	.05	.05	.05	.05	.06	.05	.05
10,000 lin.ft. wooden fence..........	.20	.20	.20	.20	.20	.20	.20	.20
330 lin. ft. wrought-iron pipe railings..........	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00
280 lin. ft. drilling bolt holes in rock..........	.60	.60	.60	.60	.60	.70	.60	.60
Doors, windows & roofing for gate-house, lump sum	600.00	600.00	600.00	600.00	600.00	720.00	600.00	600.00
Gate and gate hoists, lump sum..........	2,100.00	2,100.00	2,000.00	2,100.00	2,100.00	2,520.00	2,520.00	2,100.00
Tramway in gate-house, lump sum..........	310.00	310.00	300.00	310.00	370.00	370.00	372.00	310.00
Coffer-dams, pumping, bailing & draining, lump sum	9,000.00	9,000.00	7,000.00	9,000.00	9,000.00	10,800.00	9,000.00	9,000.00
Maintaining highway traffic, lump sum..........	500.00	500.00	500.00	500.00	500.00	600.00	500.00	500.00
For removing six buildings, each..........	40.00	40.00	40.00	40.00	40.00	45.00	41.00	40.00
Office buildings, each..........	300.00	300.00	300.00	300.00	300.00	360.00	360.00	300.00
Totals..........	$424,710	$398,835	$389,843	$397,905	$402,446	$499,536	$437,242	$400,365

BARGE CANAL, Albany, N. Y.—The item prices of the bids received by F. C. Stevens, Supt. Pub. Wks., Dec. 21, for Contract B, for excavating a channel mainly in the Seneca River, from Montezuma to deep water in Cayuga Lake, and from Cayuga Lake to Seneca Falls, and from Waterloo to deep water in Seneca Lake, were: (A) Engineer's estimate; (B) Maryland Dredging & Contracting Co., Baltimore, Md.; (C) S. Pearson & Son, Inc., 57 Fifth Ave., New York, N. Y.; (D) American Pipe & Construction Co., 112 North Broad St., Philadelphia, Pa.; (E) Grant. Smith & Co. & Locker, Grosse Isle, Mich.; (F) Sundstrom & Stratton Co., Cleveland, Ohio; (G) CROWELL-SHERMAN-STALTER CO., Cleveland, Ohio, (awarded contract):

BARGE CANAL CONTRACT B.

	A	B	C	D	E	F	G
Clearing, lump sum..........	$1,500.00	$1,500.00	$1,500.00	$1,800.00	$1,500.00	$1,725.00	$1,500.00
6,400,000 cu. yds. excavation..........	.27	.23	.245	.23	.2475	.23	.21
1,250 cu. yds. excavating, old masonry..........	1.00	1.00	1.10	1.20	1.00	1.15	1.00
40 M. ft. B. M. sheeting & bracing, first-class....	60.00	60.00	66.00	72.00	60.00	69.00	64.00
40 M. ft. B. M. sheeting & bracing, second-class..	30.00	30.00	33.00	15.00	30.00	34.50	30.00
1,000 cu. yds. forming embankment..........	.20	.20	.22	.24	.20	.24	.20
9,000 lin. ft. foundation piles..........	.30	.30	.33	.36	.30	.36	.30
100 M. ft. B. M. wooden sheet piling..........	55.00	55.00	60.00	66.00	55.00	63.25	55.00
3,000 cu. yds. second-class concrete..........	8.00	8.00	9.00	9.60	8.00	9.20	8.00
1,000 cu. yds. wash wall..........	2.25	2.25	2.50	2.70	2.25	2.70	2.25
2,000 cu. yds. second-class riprap..........	3.25	3.25	3.50	3.90	3.25	3.90	3.25
350 cu.yds. third-class riprap..........	3.00	3.00	3.25	3.60	3.00	3.45	3.00
2,000 cu. yds. fourth-class riprap..........	2.50	2.50	2.75	3.00	2.50	3.00	2.50
600 lin. ft. of wall, bailing and draining..........	6.00	6.00	6.00	7.20	6.00	6.90	6.00
Maintaining highway traffic, lump sum..........	2,500.00	2,500.00	2,500.00	1,000.00	2,500.00	2,875.00	2,500.00
3 seasons maintaining navigation..........	15,000.00	15,000.00	15,000.00	5,000.00	15,000.00	17,250.00	15,000.00
Deduct price for metal in guard gates..........	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Totals..........	$1,832,550	$1,576,550	$1,678,163	$1,555,640	$1,688,550	$1,593,080	$1,448,550

BARGE CANAL.—Albany, N. Y.—The item prices of the bids received by F. C. Stevens, Supt. Pub. Wks., Albany, N. Y., Dec. 21, for Contract A, providing for the construction of Lock No. 1 and Dam No. 1, near Cayuga, on the Cayuga and Seneca Canal, were: (A) Engineer's estimate; (B) MacArthur Bros., New York, N. Y.; (C) Coast & Interior Contracting Co., Fayetteville, N. Y.; (D) W. J. Bruns Co., Syracuse, N. Y.; (E) Great Lakes Construction Co., Buffalo, N. Y.; (F) SCOTT BROS., Rome, N. Y. (awarded contract); (G) Larkin & Sangster, Lockport, N. Y.; (H) Sundstrom & Stratton, 90 West St., New York, N. Y.; (I) Henry P. Burgard Co., Buffalo, N. Y.:

BARGE CANAL CONTRACT A.

	A	B	C	D	E	F	G	H	I
Clearng, lump sum..........	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00
70,300 cu. yds. excavation..........	1.00	.90	1.07	.95	.99	.95	1.15	1.00	1.21
12,000 cu. yds. borrow pit excavation..........	.35	.40	.35	.35	.35	.25	.385	.35	.25
80 M. ft. B.M. 1st quality sheeting & bracing.	45.00	42.00	45.00	45.00	45.00	45.00	53.00	45.00	45.00
242 M. ft. B.M. 2d quality sheeting & bracing.	20.00	20.00	20.00	20.00	20.00	20.00	23.00	20.00	15.00
11,000 cu. yds. forming embankment..........	.20	.24	.20	.20	.20	.15	.20	.22	.10
22 M. ft. B.M. sawed lumber (Y. P. or D. F.).	55.00	54.00	55.00	55.00	55.00	55.00	65.00	55.00	50.00
8 M. ft. B.M. white oak lumber in miter sills	110.00	110.00	110.00	110.00	110.00	125.00	110.00	110.00	100.00
10,400 lin. ft. foundation piles..........	.30	.35	.30	.30	.36	.30	.35	.30	.36
95 M. ft. B.M. wooden sheet piling..........	55.00	50.00	55.00	55.00	55.00	55.00	60.00	55.00	40.00
23,300 sq. ft. first quality steel piling..........	1.50	1.35	1.50	1.50	1.33	1.40	1.50	1.50	1.80
73,000 sq. ft. second quality steel piling..........	.25	.25	.25	.25	.30	.22	.30	.25	.15
23,400 cu. yds. second class concrete..........	7.60	6.80	7.65	7.50	7.50	6.60	7.85	7.89	6.70
1,380 cu. yds. second class rip-rap..........	3.25	3.00	3.25	3.25	3.25	3.25	3.50	3.25	3.25
4,000 lbs. wrought iron pipe and specials..........	.03	.03	.03	.03	.03	.03	.03	.03	.035
11,400 lbs. structural steel..........	.05	.05	.05	.05	.055	.05	.05	.05	.05
40,900 lbs. metal reinforcement..........	.035	.035	.035	.035	.035	.03	.035	.035	.03
7,000 lbs. iron castings, plain..........	.035	.035	.035	.035	.04	.035	.035	.035	.035
7,400 lbs. iron castings, machined..........	.05	.05	.05	.05	.06	.05	.05	.05	.05
196,000 lbs. metal in lock gates..........	.055	.055	.055	.055	.066	.06	.055	.055	.05
93,000 lbs. metal in buffer beams..........	.06	.06	.06	.06	.066	.06	.06	.06	.05
24,000 lbs. metal in lock valves..........	.09	.09	.09	.09	.10	.09	.09	.09	.07
325,800 lbs. metal in Taintor gates..........	.065	.065	.065	.065	.075	.075	.07	.065	.065
For removing 3 buildings, each..........	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	60.00
Coffer-dams, pumping, bailing & draining lump sum..........	18,000.00	18,000.00	18,000.00	18,000.00	20,136.57	12,000.00	21,500.00	18,000.00	20,000.00
Store house, each..........	850.00	850.00	850.00	850.00	850.00	850.00	850.00	850.00	1,000.00
For maintaining navigation, lump sum...	500.00	500.00	500.00	500.00	50.00	25.00	500.00	500.00	100.00
Totals..........	$393,133	$364,367	$399,225	$387,278	$397,778	$357,627	$421,654	$400,140	$380,528

INDUSTRIAL NOTES.

MR. J. K. DIMMICK has been elected President of the Dimmick Pipe Co., Birmingham, Ala.

THE BEST MFG. CO. announces that it has moved to its new location at Oakmont, Pa., a suburb of Pittsburg. The new plant will more than double the capacity of the company in addition to concentrating the work.

THE VONNEGUT MACHINERY CO. will be the new name of the machinery department of the Vonnegut Hardware Co., Indianapolis, Ind., after Jan. 1. The Vonnegut Machinery Co. will be located at 43 South Meridian St., Indianapolis.

THE UNIVERSAL ROAD MACHINERY CO., formerly located at 120 Liberty St., New York, has moved its general offices to Kingston, N. Y., where the factory is located. The President of the company, Mr. Geo. H. Ford, however, will maintain an office at the old New York City address.

THE JEFFREY MFG. CO., Columbus, Ohio, announces that a new office has been opened in the Fourth National Bank Bldg., Atlanta, Ga. This office will be in charge of Mr. D. G. Rose. A stock of Jeffrey chains will be carried and information will be gladly given regarding elevating and conveying machinery made by the company.

A COMMERCIAL MOTOR VEHICLE EXHIBITION will be held in Chicago on Feb. 6 to 11, 1911, following immediately after the annual automobile exhibition of Jan. 28 to Feb. 6. Over 50 firms have taken space and about 200 exhibits will be made of motor trucks, delivery wagons and self-propelled road machines for all kinds of industrial purposes.

THE DOWNEY HEATING & SUPPLY CO. is the title of the company succeeding to the Downey & Kruse Co., and the H. Moore Co. The offices will be located at 613 and 615 Clybourn St., Milwaukee, Wis., where a complete stock of engineers' supplies will be

...The company will also operate a ...uipped machine and steam fitting ...

...NICHOLS & BROTHER, 1090 Old ...uilding, Chicago, are introducing an ...ractor for turntables which has suf... ...ctive power to handle large turn... ...with very heavy engines. Four of ...ave been supplied to the Virginia Ry. ...turntables handling Mallet loco... ...weighing (with tender) 310 tons and ...a length of 96 ft. 4 ins.

...HART & DENNIS CO., Evans Bldg., ...ton, D. C., has increased its capital ...0,000 to $1,000,000. This firm of rail... ...tractors now have under active con... ...n contracts aggregating about $8,000,-... ...luding contract No. 5 for the Catskill ...uct; about 40 miles of railway work on ...arolina, Clinchfield & Ohio Ry., and ...acts for the Norfolk & Western.

...TOMOBILE TRUCKS to the number of ...ave recently been ordered by the Texas ...This company, which is one of the prin... ...l independent producers of petroleum ...ducts, in making this purchase doubled a ...mer purchase in buying Mack trucks, ...e by Mack Bros. Motor Car Co., 50 ...rch St., New York City. The 20 trucks ...owned by the Texas Co. represent an ...estment of at least $100,000.

...HE MOTORS ENGINEERING & SALES ..., 250 West 54th St., New York City, an... ...unces that Mr. R. S. de Mitkiewicz, late ...ociated with the Alden Sampson Mfg. Co., ...mmercial branch of the U. S. Motors Co., ...now Power Sales Engr. for the Motor ...ngineering & Sales Co. Mr. de Mitkiewicz ...l devote his attention to placing the Kelly ...otor trucks in the eastern territory. His ...eadquarters will be at 250 West 54th St., ...ew York, N. Y.

MR. S. FISCHER MILLER, Singer Bldg., New York, N. Y., has been elected president of the Pacific Flush Tank Co., Chicago, Ill. His address will remain unchanged. Other changes are as follows: Mr. E. L. Walcott, Vice-Pres., was formerly Gen. Mgr., of the Modern Iron Works, Quincy, Ill.; Mr. Walter H. Miller, Treas., formerly Vice-Pres. and Treas., Mr. Miller is President of Miller & Hart, Packers, 25th & LaSalle St., Chicago, Ill.; Lester E. Rein, Secy., Chicago, Ill.

THE LATHBURY-D'OLIER CO., is the name of the consolidated interests of Mr. B. B. Lathbury and the D'Olier Engineering Co. The offices are in the Morris Bldg., Philadelphia, Pa. Mr. B. B. Lathbury, A. Am. Soc. C. E., has for a number of years specialized in the design and construction of portland cement plants. The D'Olier Engineering Co., has carried on an extensive business in engineering and contracting work, especially in steam, electric and hydraulic plants.

THE J. I. CASE THRESHING MACHINE Co., Racine, Wis., is completing a building, 60 × 215 ft. for exclusive use as a stock room for the boiler shops. A boiler storage house 60 × 230 ft. has been finished, and is equipped with a traveling crane. A two-story warehouse, 100 × 250 ft. is being remodeled for use as a machine shop, in order to increase the facilities. Other buildings are to be put under construction when the weather permits. All this work is under the direction of the company's architect.

THE RICHARDSON-PHENIX CO., Milwaukee, Wis., a consolidation of the Site Feed Oil Pump Co., of Milwaukee, and Phenix Lubricator Co., of Chicago, has completed the equipment of its new plant in Milwaukee, which, it is claimed, is the largest plant in the country devoted exclusively to lubricating devices. Mr. J. William Peterson, Pres. of the Peterson Engineering Co., lubrication Engineers, New York City, has been appointed General Manager of Sales, with headquarters in the Hudson Terminal Bldg., New York, N. Y., and Mr. J. S. Ward is Manager of the Western Sales Office, located in the First National Bank Building, Chicago, Ill.

THE ADDITION to the boiler shops of the J. I. Case Threshing Machine Co., Inc., Racine, Wis., is just being completed. This is a building 60 × 215 ft., which will be used exclusively for a stock room for the Case boiler shops. A boiler storage has been completed, 230 × 60 ft. This is equipped with a traveling crane for movement of boilers from one part of the building to another. Under the supervision of the case architect, the above work has been undertaken and completed, also the remodeling of the Garfield warehouse, which is 100 × 250 ft. and two stories high. This building, when the remodeling is completed, will be used as a machine shop. Machine shop facilities have not been adequate.

RECENT CHANGES IN FOREIGN TARIFFS.—The initial number of a publication, entitled "Foreign Tariff Notes," has just been issued by the Bureau of Manufacturers of the Department of Commerce and Labor. The scope of the new publication is a broad one, embracing changes in rates of import and export duty in all the important countries of the world; notice of proposed or pending revisions of foreign tariffs is also given, together with amendments of the customs and consular regulations. The first number covers the changes for the last five months; the separate items it contains have appeared from time to time in the Daily Consular and Trade Reports since July, and are now reprinted for greater convenience of reference. A special chapter describes the regulations governing the admission of automobiles in several countries. Future issues of Foreign Tariff Notes will be published as often as the number of items requires.

FIGURES SPECIALLY COMPILED by "The Journal of Commerce and Commercial Bulletin" show that in January a new high record total of $226,747,350 will be paid in dividends and interest by railroads, industrial and traction corporations, banks and trust companies, the national Government and Greater New York. This compares with $200,527,815 last January, an increase of $26,219,535. Next month the sum of $93,456,100 will be disbursed to stockholders in the way of dividends, or $8,349,535 more than in February, 1910. In brief, many corporations were enabled to resume or increase dividends, while others were able to make initial payments. A few reductions are noted. As customary, industrial corporations furnish the most striking changes. Concerning the showing, it should be mentioned that the current dividend returns are more complete than in the opening month this year. Interest payments amount to $133,291,250, or an increase of $17,860,000, due to large output of bond and note issues and also to the large amount of New York City revenue bonds that mature next month.

A MODERATE INCREASE in the number of idle freight cars was reported for the fortnight ending Dec. 21. The bulletin of the American Railway Association figures that the increase between Dec. 7 and Dec. 21 was 7,400 cars. Following is a table showing the surplusses at various recent dates:

	Net Surplus.
Dec. 21	51,413
Dec. 7	44,014
Nov. 23	28,393
Nov. 9	13,581
Oct. 26	7,235
Oct. 12	13,316
Sept. 28	24,528
Sept. 14	47,076
Aug. 31	50,729
Aug. 17	73,679
Aug. 3	102,781
July 20	133,301
July 6	142,865
June 22	122,915
June 8	126,497
May 25	110,661
May 11	122,593
April 27	96,319
April 13	77,357
March 30	25,886
Feb. 16	31,204
Jan. 19	24,902
Dec. 22, 1909	24,054

NEW RAILROAD MILEAGE.—"The new mileage added during the past year in the United States is greater than that for the previous year. This is quite a satisfactory showing, as financial conditions have not yet sufficiently improved to induce investors to back new projects, and uncertainty as to the prospects of future traffic has caused the suspension of work already started and prevented other plans for new work being carried out. Official returns from nearly all the railways in the United States, supplemented by our own records and figures furnished by the State railway commissions, show that approximately 4,122 miles of new main track were built in the United States during the calendar year 1910, as compared with 3,748 miles during 1909. The 1909 record was over 500 miles more than for the preceding year, which was the smallest since 1897.

"Many of the larger railways which are included in the list have only added new mileage for work started the previous year, and with a few exceptions no new work of importance has been started. Considerable progress was made during the year in making permanent improvements to roadbed to carry heavier rolling stock, straightening alinement and reducing grades. Many of the strongest railways have reduced construction to the minimum.

On the cut-off which the Atchison, Topeka & Santa Fe is building between Texico, N. Mex., and Coleman, Tex., which is to have a total length of 310 miles, there was completed a section of 160 miles between Lubbock and Coleman. This was the longest single stretch of new road built. The Chicago, Milwaukee & Puget Sound added the largest amount of new mileage, having built 72 miles in Idaho, 84 miles in Washington, 132 miles in South Dakota and 124 miles in North Dakota, a total of 421 miles. The Santa Fe is second with 100 miles in California and 298 miles in Texas. The Northern Pacific built 236 miles.

In Canada the Grand Trunk Pacific built 335 miles, and on the eastern end the National Transcontinental built 437 miles, a total of 772 miles.

The following table shows our figures for mileage built in the United States during the last eighteen years:

1893	3,024	1899	4,569	1905	4,388
1894	1,760	1900	4,894	1906	5,623
1895	1,428	1901	5,368	1907	5,212
1896	1,692	1902	6,026	1908	3,214
1897	2,109	1903	5,652	1909	3,748
1898	3,265	1904	3,832	1910	4,122

—Railway Age Gazette.

OCTOBER NET EARNINGS LESS.—While the gross earnings for October of 754 companies show a gain of $2,662,525, the net earnings are smaller by $11,029,095, the latter being equal to 10.76% as compared with a year ago. Concerning this exhibit, the "Financial Chronicle" says:

"On account of the augmentation in expenses we have had losses in net earnings for each month of the new fiscal year since the first of July, but the falling off for October is much the largest yet reached in the downward course of the net. The reason why the returns are growing steadily more unfavorable is that additions to gross receipts (speaking of the roads collectively) are now of small proportions, while, on the other hand, expenses are being apparently increased in fixed amounts because of the advances which have been made in wages, and it seems to be impossible to curtail outgoes to any great extent, or at least the effort, if made, is not proving successful.

"Here is a summary of the returns, with comparisons:

Oct'r (754 roads)—	1910.		Amount.	%
Miles of road.	232,162	Inc.	4,112	1.84
Gross earn'gs..	$256,585,392	Inc.	$2,662,525	1.05
Oper'g expen's.	165,133,783	Inc.	13,691,620	9.04
Net earnings	$91,451,609	Dec.	$11,029,095	10.76

"Some roads have sustained heavy losses even in gross, but that has happened only in special instance where exceptional conditions have brought about a falling off in certain kinds of traffic. The remark applies more particularly to the roads traversing the spring wheat districts of Minnesota and North and South Dakota, where the wheat yield the present year was heavily reduced.

The October net earnings for a series of years follow:

	Net earnings.	Increase.
1896	$24,162,741	*$1,775,546
1897	27,875,335	2,049,762
1898	32,203,684	2,495,447
1899	36,761,616	4,108,928
1900	38,239,892	*290,359
1901	45,303,549	7,693,602
1902	40,669,565	*416,786
1903	43,341,694	2,407,665
1904	48,561,136	4,847,868
1905	49,824,783	3,030,103
1906	51,685,226	4,858,869
1907	46,983,608	*3,864,295
1908	88,534,455	5,176,453
1909	103,984,540	15,246,353
1910	91,451,609	*11,029,095

*Decrease.

NEW INCORPORATIONS DURING 1910.—Papers filed in the Eastern States in December for companies with an authorized capital of $1,000,000 and over represented a par value of $132,587,050, making the total for the year $1,967,617,450. This is the best showing made since 1906, when the output of new concerns involved $2,297,970,000. The large companies incorporated in States other than those of the East during December amounted to $13,525,000 and for the year to $255,140,400. Charters taken out by other companies with an individual capital of $100,000 or more but under $1,000,000 during the past month represented $52,178,285, which brought the grand total for 1910 up to $2,869,073,742.

Following are the comparative figures as specially compiled by The Journal of Commerce and Commercial Bulletin of companies incorporated in the Eastern States during the last three years with an authorized capital of $1,000,000 or more:

	1910.	1909.	1908.
Jan. ..	$187,180,000	$80,550,000	$72,150,000
Feb. ..	169,468,000	76,250,000	113,840,000
Mar. ..	302,659,600	50,250,000	69,782,000
Apr. ..	254,085,000	100,348,900	82,400,000
May ..	139,980,400	195,773,100	123,300,000
June ..	231,319,400	212,575,000	188,164,000
July ..	112,020,000	106,496,000	85,301,250
Aug. ..	107,500,000	88,500,000	43,515,000
Sept. ..	58,100,000	225,925,000	53,300,000
Oct. ..	93,695,000	145,500,000	114,750,000
Nov. ..	119,023,000	146,951,000	106,350,000
Dec. ..	132,587,050	136,870,000	108,255,000

—"Journal of Commerce."

SHIPBUILDING IN GREAT BRITAIN.—The shipbuilding returns for the Northeast Coast for the year are approaching completion, and show that the output of tonnage was:

For the Tyne, 78 vessels of 249, tons, against 102 last year of 207,638 tons.

For the Wear, 58 vessels of 180,895 tons, against 57 last year of 141,402 tons.

For the Tees, 65 vessels of 127,149 tons, against 27 last year of 66,895 tons.

For West Hartlepool, 21 vessels of 91,817 tons, against 20 last year of 72,587 tons.

For Blyth, 4 vessels of 4,896 tons, against 10 last year of 6,276 tons.

Despite the labor unrest during the past year, the shipbuilding industry has been exceptionally busy, the total output for the Northeastern ports showing an aggregate tonnage of 654,769 tons, against 494,796 tons last year.

Details have been obtained of the year's work in the Clyde shipbuilding industry. Despite the 15 weeks lockout, the year's production has reached 390,000 tons, or only 14,000 tons less than the previous year's total. The feature is the heavy weight of the new work to be carried into next year. The total orders exceed 400,000 tons, of which 140,000 tons are in warships for the home navy. This naval work is a record in the trade's history.

The most interesting feature of the mercantile work on hand is the great Cunarder of 50,000 tons burden. Some large liners for the leading trade routes are also to be built.

ONE OF THE LARGEST contracts for pumping machinery ever placed, has just been awarded to the Alberger Pump Company of New York City by the Bureau of Yards & Docks, the total sum involved being slightly over $323,000. The contract covers pumping equipment for the three new dry docks to be constructed by the Government at New York, Puget Sound and Pearl Harbor Navy Yards, and includes, all told, eleven 54 in. vertical volute pumps, each direct connected to a 550 HP. induction motor, and seven 15-in. vertical volute drainage pumps, each direct connected to an 85 HP. induction motor; also all necessary suction and discharge piping, electrically operated, gate valves for the same and all electrical controlling apparatus for the motors. Three of the 54-in. units will be located at New York, while four of these units are required for each of the other docks.

Each unit is required to operate against a static head, varying from zero when the dock is full to a maximum of 42 to 44 ft. when the dock is completely empty, while operating at a constant speed of 219 r. p. m. without exceeding the rated horse power of the motor at any point. In addition to this, each pump is required to maintain an average capacity of 66,000 gals. per min. when emptying the dock from approximately mean high water to one ft. above the elevation of the keel blocks, the static head varying from zero to 32 or 34 ft. Under these conditions the contractor has guaranteed an average efficiency of 45% for New York and Pearl Harbor and 46% for Puget Sound, these efficiencies being the ratio of the actual useful work in pumping the docks to the electrical input to the motors, and consequently includes all losses in the motors, pumps and piping. To meet these average efficiencies it is necessary for the pumps themselves to reach a maximum efficiency of nearly 80%.

WASTEFUL AMERICANS.—Nothing could be more impressive, if stories involving millions and billions made an impression, than the statistical tales of American wastefulness which are told by so many experts. The other day the governor of a great agricultural state informed us that the American farmers waste at least $500,000,000 a year through bad farming. The medical men have been grieving for some yetrs over the waste, through the ravages of preventable diseases, of human life to which a money value of untold millions could be assigned. The humanitarians have waxed eloquent over the needless and costly toll of human life which some of the great industries are exacting.

The fire insurance experts add another count to the waste, indictment returned against Americans. They say that nearly all of the $230,000,000 worth of property burned up last year was a needless waste. This is no new charge. The underwriters have been making it for a quarter of a century, but the people have paid no attention. They have argued that the waste they were guilty of could be made good by insurance. It is a singular short-sighted policy, for it forces up insurance rates to a point where they may be burdensome. Then the insured complain bitterly of the rates, and refuse to see that they themselves, through faulty construction, a lack of care, an inadequate water supply, or too small a fire department, have made them high.

Preaching seems to do no good. We keep on wasting in many ways, and staid old-fashioned Europe looks with wonder at our extravagance and is amazed that we are able to stand it. We are able, but if we were to give up our wasteful ways we should roll in riches. We should have money enough for all the beneficent purposes that the kindly heart of man could devise. We could almost abolish poverty.—Chicago "Tribune."

THE FIRST ANNUAL New York Cement Show was held in Madison Square Garden Dec. 14 to 20. The exhibits included a variety of machines and tools used in concrete construction. The exhibitors were as follows: The Abbey Dodge Brooks Concrete Co., Newark, N. J.; Aberdeen Co., 20 Broad St., New York, N. Y.; Alpha Portland Cement Co., Easton, Pa.; Alsen's American Portland Cement Works, 45 Broadway, New York, N. Y.; Allentown Portland Cement Co., Allentown, Pa.; American Cement Co., Philadelphia, Pa.; American Cement Tile Mfg. Co., 29 Broadway, New York, N. Y.; American Mason Safety Tread Co., Boston, Mass.; American Saw Mill Machinery Co., 50 Church St., New York, N. Y.; American Steel & Wire Co., 115 Adams St., Chicago, Ill.; Ashland Steel Range & Mfg. Co., Ashland, Ohio; Anchor Concrete Stone Co., Rock Rapids, Iowa; Art Stone Co., Waynesboro, Pa.; Arrowsmith Concrete Tool Co., Arrowsmith, Ill.; Atlas Portland Cement Co., 30 Broad St., New York, N. Y.; Barrett Mfg. Co., 17 Battery Place, New York, N. Y.; Barron & Cole Co., Barron Bldg., New York, N. Y.; Best Bros. Keene's Cement Co., Medicine Lodge, Kan.; Blanc Stainless Cement Co., Allentown, Pa.; Blanchite Paint Co., 139 Charles St., New York, N. Y.; Blaw Collapsible Steel Centering Co., Pittsburg, Pa.; Harold L. Bond Co., 383 Atlantic Ave., Boston, Mass.; Briggs Labor Saving Specialty Co., Waterloo, Iowa; Buebendorf Bros., N. Y., Produce Exchange, New York, N. Y.; Brown Hoisting Machinery Co., Cleveland, Ohio; Building Trades Employers' Assn., 8-10 Burling Slip, New York, N. Y.; Samuel Cabot, Inc., 141 Milk St., Boston, Mass.; James C. Campbell & Co., First National Bank Bldg., Chicago, Ill.; Chain Belt Co., Milwaukee, Wis.; Myron C. Clark Publishing Co., 355 Dearborn St., Chicago, Ill.; Charles J. Cordes, Waldwick, N. J.; Clinton Wire Cloth Co., 133 West 27th St., New York, N. Y.; John G. Clough, Quincy, Ill.; Cement Age., 30 Church St., New York, N. Y.; Cement Era, Mentor Bldg., Chicago, Ill.; Cement Machinery Co., Jackson, Mich.; Cement Tile Machinery Co., Waterloo, Iowa; Ceresit Waterproofing Co., 115 Adams St., Chicago, Ill.; Colwell & Smith, 1133 Broadway, New York, N. Y.; Concrete Age, Atlanta, Ga.; Congrete Engineering, Caxton Bldg., Cleveland, Ohio; Concrete Products Co., 35 West 32d St., New York, N. Y.; Concrete Products Manufacturers' Association, Newark, N. J.; Concrete Publishing Co., Detroit, Mich.; Concrete-Steel Co., 29 Broadway, New York, N. Y.; Corrugated Bar Co., St. Louis, Mo.; Crane & Mahoney, 110 West End Ave., New York, N. Y.; Cropp Concrete Machinery Co., 84 La Salle St., Chicago, Ill.; Crown Point Spar Co., 21 West Fourth St., New York, N. Y.; Wm. J. Cullen, 170 Broadway, New York, N. Y.; Decorators' Supply Co., Archer Ave. and Leo St., Chicago, Ill.; Detroit Steel Products Co., Detroit, Mich.; Dexter Bros. Co., 103-7 Broad St., Boston, Mass.; Charles Dietrichs, 22 East 21st St., New York, N. Y.; Edison Portland Cement Co., St. James Bldg., New York, N. Y.; Elite Manufacturing Co., Ashland, Ohio; Engineering News, New York, N. Y.; Engineering Record, New York, N. Y.; Erkins Studio, Inc., 227 Lexington Ave., New York, N. Y.; Eureka Machine Co., Lansing, Mich.; J. B. Foote Foundry Co., Fredericktown, Ohio; Samuel H French & Co., York Ave. and Fourth St., Philadelphia, Pa.; The Gearless Co., 17 North Main St., Gloversville, N. Y.; General Fireproofing Co., Youngstown, Ohio; Frank B. Gilbert, Inc., 60 Broadway, New York, N. Y.; Glidden Varnish Co., Cleveland, Ohio; Good Roads Magazine, 150 Nassau St., New York, N. Y.; Graphite Elastic Cement Roofing Co., Cleveland, Ohio; Hall Concrete House Co., 257 39th St., Brooklyn, N. Y.; Hayden Automatic Block Machine Co., Columbus, Ohio; John W. Higman Co., 112 Wall St., New York, N. Y.; Hill Clutch Co., Cleveland, Ohio; Hobbs Concrete Machinery Co., Detroit, Mich.; H. C. Horn Co., 8-10 Burling Slip, New York, N. Y.; Hotchkiss Lock Metal Form Co., Binghamton, N. Y.; Benj. A. Howes, 15 West 38th St., New York, N. Y.; Robert W. Hunt & Co., 90 West St., New York, N. Y.; Humane Horse Collar Co., Chicago Heights, Ill.; Ideal Concrete Machinery Co., South Bend, Ind.; Insulite Chemical Co., Aurora, Ill.; Ironite Co., 84 La Salle St., Chicago, Ill.; Jeffrey Mfg. Co., Columbus, Ohio; W. B. Jones, Streator Boiler Works, Streator, Ill.; Kelley Island Lime & Transport Co., Cleveland, Ohio; Kennicott Co., 602 Corn Exchange Bank Bldg., Chicago, Ill.; Kent Machine Co., Kent, Ohio; Kent Mill Co., 170 Broadway, New York, N. Y.; Keystone Varnish Co., 71 Otsego St., Brooklyn, N. Y.; Knickerbocker Co., Jackson, Mich.; Knickerbocker Portland Cement Co., 1 Madison Ave., New York, N. Y.; Koehring Machine Co., Milwaukee, Wis.; Kramer Au-

tomatic Tamper Co., Peoria, Ill.; La Grange Specialty Co., La Grange, Ind.; Lawrence Cement Co., 1 Broadway, New York, N. Y.; Link Belt Co., 39th and Stewart Ave., Chicago, Ill.; Lock Joint Pipe Co., 165 Broadway, New York, N. Y.; Luck Cement Post Mould Co., Aurora, Ill.; Manufacturers' Record, Baltimore, Md.; Marbolith Stone Co., 11 East 24th St., New York, N. Y.; Marsh-Capron Mfg. Co., Old Colony Bldg., Chicago, Ill.; McArthur Concrete Pile & Foundation Co., 11 Pine St., New York, N. Y.; McElroy & Shepherd, Whitestone, Long Island, N. Y.; Alexander Milburn Co., 507 West Lombard St., Baltimore, Md.; Clifford Miller & Co., 110 East 23d St., New York, N. Y.; Milwaukee Concrete Mixer & Machinery Co., Milwaukee, Wis.; Minwax Co., 1123 Broadway, New York, N. Y.; Monument Plaster Co., Newark, N. J.; Milton Dana Morrill, Corcoran Bldg., Washington, D. C.; Municipal Engineering & Contracting Co., Railway Exchange Bldg., Chicago, Ill.; National Mixer 400 Powers Bldg., Rochester, N. Y.; New Process Stone Co., 117 Ostranda Ave., Syracuse, N. Y.; Norwalk Vault Co., Norwalk, Ohio; Nugget Polish Co., 299 Broadway, New York, N. Y.; Obelisk Waterproofing Co., 1 Madison Ave., New York, N. Y.; Ohio Post Mold Co., Nicholas Bldg., Toledo, Ohio; Ottawa Silica Co., Ottawa, Ill.; Peerless Brick Machine Co., Minneapolis, Minn.; Pennsylvania Cement Co., 29 Broadway, New York, N. Y.; Pennsylvania Crusher Co., Stephen Girard Bldg., Philadelphia, Pa.; Pfeiffer Brothers, Kaiserlautern, Germany; Pittsburg Steel Products Co., Pittsburg, Pa.; D. & A. Post Mold Co., Three Rivers, Mich.; Progress Publishing Co., 13-21 Park Row, New York, N. Y.; Quenner Dry Crusher Co., Singer Bldg., New York, N. Y.; Radford Publications, Medinah Bldg., Chicago, Ill.; Raber & Long Mfg. Co., Kendallville, Ind.; Ransome Concrete Machinery Co., Dunnellen, N. J.; Raymond Concrete Pile Co., 140 Cedar St., New York, N. Y.; Reichert Mfg. Co., Milwaukee, Wis.; Richardson Scale Co., 3 Park Row, New York, N. Y.; Richardson & Boynton Co., 31 West 31st St., New York, N. Y.; Rickman Cement & Construction Co., Revelstoke, B. C.; Rock Products, 355 Dearborn St., Chicago, Ill.; Sandusky Portland Cement Co., Sandusky, Ohio; Sasgen Bros., 2053 Racine Ave., Chicago, Ill.; Simpson Cement Mold Co., Columbus, Ohio; B. D. Smith, Mount Healthy, Ohio; F. L. Smith & Co., 50 Church St., New York, N. Y.; F. P. Smith Wire & Iron Works, 100 Lake St., Chicago, Ill.; T. L. Smith Co., Old Colony Bldg., Chicago, Ill.; Somers Bros., Urbane, Ill.; Standard Paving Co., Newark, N. J.; Standard Scale & Supply Co., 136 West Broadway, New York, N. Y.; Sterrit-Thomas Foundry Co., 32d and Smallman Sts., Pittsburg, Pa.; Stocker Concrete Material Washer Co., Highland, Ill.; Studebaker Bros. Co., Broadway and Seventh Ave., New York, N. Y.; G. L. Stuebner Iron Works, Long Island City, N. Y.; Sturtevant Mill Co., Boston, Mass.; Taylor Iron & Steel Co., High Bridge, N. J.; Toch Bros., 320 Fifth Ave., New York, N. Y.; Toledo Wheelbarrow Co., Toledo, Ohio; Trussed Concrete Steel Co., Detroit, Mich.; Tucker & Bertin, 35 West 32d St., New York, N. Y.; Turner Construction Co., 11 Broadway, New York, N. Y.; United Concrete Machine Co., Columbus, Ohio; Universal Portland Cement Co., 115 Adams St., Chicago, Ill.; Universal Unit System, 132 Nassau St., New York, N. Y.; W. H. Van Guilder, 170 Lockwood Ave., New Rochelle, N. Y.; Virginia Portland Cement Co., 26 Beaver St., New York, N. Y.; Virginia Waterproofing Corp., Norfolk, Va.; B. Voight, 68 Broad St., New York, N. Y.; Vulcanite Portland Cement Co., Fifth Ave. Bldg., New York, N. Y.; Wadsworth-Howland & Co., Inc., Boston, Mass.; Charles Warner Co., Wilmington, Del.; Warner & Haviland, 79 Walker St., New York, N. Y.; Waterloo Cement Machinery Corporation, Waterloo, Iowa; The Waterproofing Co., 150 East 36th St., New York, N. Y.; C. S. Wert, Kendallville, Ind.; W. H. Wilcox Co., Binghamton, N. Y.; Wilson & Baillie, 26 Court St., Brooklyn, N. Y.; X-L-All Manufacturing Co., 21 South Clinton St., Chicago, Ill.; Zeiser Bros., Berwick, Pa.; Zibell Damp Resisting Paint Co., 273 Water St., New York, N. Y.

TRADE PUBLICATIONS.

WATER POWER DEVELOPMENT.—American Spiral Pipe Works, Chicago, Ill. Paper; 6 × 7½ ins.; pp. 15; illustrated.

Under the title "Water Powers of the Third Magnitude" the Pipe Works mentioned above has gotten up an interesting and attractive illustrated description of a small water-power plant recently built for the North Creek Electric Co., North Creek, N. Y.

HAND STREET-CLEANING SUPPLIES.—The Menzies Street Cleaner Co., Glens Falls, N. Y. Paper; 6 × 9 ins.; pp. 12; illustrated.

Most of this catalog is devoted to a combination "dust-pan" and wheeled street-dirt can. The sweepers push the dirt onto the dust-pan, which is so attached to the can that it may be easily lifted and dumped into that receptacle.

OPEN-AIR COTTAGES.—The Metal Screen & Cottage Co., 108 South Robert St., St. Paul, Minn. Paper; 7½ × 5¼ ins.; pp. 20; illustrated.

These structures have steel frames, with sides formed of galvanized wire screens, and roofing of heavy canvas. Canvas side-screens are provided also. They are intended for individual use and also for hospital and camp use. Metal-framed window screens and porch screens are listed also.

NIGHT SOIL AND GARBAGE INCINERATORS.—The Harris Incinerator Co., Rochester, N. Y. Paper; 6 × 9 ins.; pp. 8; illustrated.

Portable sheet metal privies arranged with two rows of seats, with furnace space beneath and with 16-ft. stacks, are here described and illustrated. At intervals, the wood seats are removed, the holes covered with steel and fires built. The garbage crematory described is of the same general style.

WESTINGHOUSE DIARY FOR 1911.—2¾ × 5¼ ins.; pp. 96; besides diary and memorandum pages. The Westinghouse Electric & Mfg. Co., Pittsburg, Pa.

This useful little annual contains a surprisingly large amount of data convenient for reference, in very small compass. The data does not relate to electrical engineering solely, but covers a wide range. A description is given, for instance, of the latest signaling apparatus used in the Pennsylvania's New York tunnel and terminal.

STEAM SHOVELS.—Atlantic Equipment Co., 111 Broadway, New York, N. Y. Paper (pamphlet No. 10029); 9 × 6 ins.; pp. 44; illustrated.

The Atlantic steam shovel has as its special features (1) the mounting of the hoisting engine upon the turntable which carries the boom; (2) the direct lead of the cable from this engine to an attachment to the bucket (no blocks and no bail being used); (3) the use of an ordinary locomotive boiler and cab, with side tanks. The special features are described and there are numerous illustrations showing the machines in use on railway and other work. A dipper dredge for Cuba is illustrated.

BLUE PRINT MACHINERY.—The C. F. Pease Co., 167 Adams St., Chicago, Ill. Cardboard; 6 × 9 ins.; pp. 94; illustrated.

The Pease automatic blue print machinery is described in detail in this valuable little booklet. This line of machinery comprises continuous electric printing machines, automatic washing and drying machines, or both combined. These machines are illustrated, and directions are given for their use. The most interesting announcement, however, is a method of making white prints directly from tracings without the labor and trouble heretofore involved in first making negatives. It is claimed by the makers that this process requires only one-fourth the time necessary for the former process. The great advantage of blue-line white prints over ordinary blue prints for such purposes as reports, specifications, tabulations, etc., is appreciated by all engineers. Besides these machines this company also manufactures all accessories for making blue prints, as well as drafting-room supplies. It is a pamphlet that all draftsmen will examine with a great deal of interest.

SECOND-HAND MACHINERY.—W. Shaw Machinery Co., 171 La Salle St., Chicago. Paper; 5⅝ × 3½ ins.; pp. 32.

This is a classified list of machinery which the company has on hand; it includes locomotives, excavators, buckets, scrapers, drills, graders, pumps, electrical apparatus, hoisting engines, etc., etc.

PIPE COATING AND RESERVOIR WATERPROOFING.—The American Asphalt & Rubber Co., 600 Harvester Bldg., Chicago. Paper; 3½ × 6½ ins.; pp. illustrated.

The use of "Pioneer" mineral-rubber coating for steel pipe lines and the bands of wooden stave pipe lines is described and illustrated. Also the "Pioneer" waterproofing asphalt for reservoirs. Specifications are given for the use of both materials and there is a list of some of the engineers who have used and specified the materials.

(Continued on page 16.)

LIST OF CONTRACTS PENDING.

Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file for reference only unless otherwise noted at the office of The Engineering News Publishing Co., 220 Broadway, New York.

Bids close.		Noted in issue of
1- 7	Dredging, Hawaii (U. S. Poss.) (S)	10-27
1- 7	Elec. capstan, Portsmouth, N. H. (S)	12- 8
1-21	Oil storage house, Bremerton, Wash. (S.)	12- 1
1-28	Foundry, Bremerton, Wash. (Mfg. P.) (S.)	12- 8
1-28	Repairs, etc., Washington, D. C. (S.)	12-29

Light, Heat and Power Plants.

Bids close.		Noted in issue of
1- 7	Elec. capstan, Portsmouth, N. H.	12- 8
1- 9	Heat and vent., New York, N. Y.	12-22
1- 9	Elec. and plumbing system, Howard, R. I.	12-29
1-10	Heating plant, Washington, D. C.	1- 5
1-10	Motor-driven pump, Shakopee, Minn.	1- 5
1-13	Wiring, Charleston, S. C.	1- 5
1-13	Wiring & heating, Columbus, Ohio	12-29
1-16	Electrical supplies, Bath, Me.	12-15
1-17	Miscel. electrical supplies, Pottstown, Pa.	12-15
1-17	Elect. supplies, Regina, Sask.	1- 5
1-18	Elect. equip., Vicksburg, Miss.	1- 5

Bridges.

1- 6	Bridge work, Grundy Center, Iowa	1- 5
1- 7	Arch, Galion, Ohio	1- 5
1- 7	Bridges, Wessington Springs, S. Dak.	12-22
1- 9	Highway bridges, East St. Louis, Ill.	12- 8
1- 9	Bridge, Quebec, Que.	12-29
1- 9	Bridge work, Warren, Ohio	12-29
1- 9	Bridge, Crete, Ill.	1- 5
1-10	Culverts, La Moure, N. Dak.	12-29
1-10	Bridges, York, Neb.	12-29
1-10	Bridge work, Geneva, Neb.	12-22
1-10	Bridge work, New York	12-29
1-11	Bridge, Quebec, Que.	12-29
1-13	Bridge, Lockland, Ohio	12-29
1-16	Superstructure, Jefferson, Ohio	1- 5
2- 1*	Bridge plans, etc., Richmond, Va.	12- 8

Buildings.

At once	Apartment house, Baltimore, Md.	1- 5
1- 6	School, Duluth, Minn.	12-22
1- 7	Mchy., Sawtell, Cal., (Mfg. Pl.)	12-22
1- 7	Post-office, Waycross, Ga.	12- 8
1- 7	Engineering bldg., Gainesville, Fla.	1- 5
1- 9*	Store house, Madison Barracks, N. Y.	12-15
1- 9	City building, E. Youngstown, O.	12-22
1- 9	Court-house, Beeville, Texas	12-29
1- 9	Sanitarium, St. Louis, Mo.	12-29
1-10	Club building, Portland, Ore.	12-15
1-10	Theatre, Baltimore, Md.	12-15
1-10	Store building, Detroit, Mich.	12-15
1-11	Home, Harrisburg, Pa.	12-15
1-12	Building, New York, N. Y.	1- 5
1-15	Y. M. C. A. building, Burlington, Iowa	12-15
1-16	Court-house, Lake Charles, La.	12-15
1-17	Building, Schuylkill Haven, Pa.	12- 8
1-19	Court-house repairs, Brookville, Ind.	12-15
1-21	Oil storage house, Bremerton, Wash.	12- 1
1-21*	Post-office, etc., Bowling Green, Ky.	12-29
1-23	Custom-house repairs, Quebec, Que.	12-29
1-24*	Building equipment, Albany, N. Y.	12-22
1-25*	Post-office, Stevens Point, Wis.	12-22
1-26*	Building, Washington, D. C.	12- 1
1-26	Post-office, Independence, Kan.	12- 1
1-28	Repairs, etc., Washington, D. C., (Mfg. Pl.)	12-29
1-28	Foundry, Bremerton, Wash. (Mfg. Pl.)	12- 8
1-31	Court-house, Onida, S. Dak.	10-20
2- 1	Building, Lockport, N. Y.	12-15
2- 1	Mills, Los Angeles, Cal. (Mfg. Pl.)	12-22
2- 1	Buildings, Owings Mills, Md.	1- 5

Bids close.		Noted in issue of
2- 2*	Post-office, etc., Roswell, N. Mex.	1- 5
2- 3*	Post-office, etc., Salt Lake City, Utah	1- 5
2- 6	Post-office, Mt. Clemens, Mich.	1- 5
2-26	School, Carcross, Yukon	1- 5
4-15	Plans, Havana, Cuba	10-20

Water-Works.

1- 5	Pumping engine, Sparta, Wis.	1- 5
1- 6	Water pipe, Soho, N. J.	1- 5
1- 6	W-wks. extensions, Superior, Neb.	12-29
1- 6	Water pipe, Spokane, Wash.	12-29
1- 9	Water mains, Euclid, Ohio	12-22
1- 9	Water tank, Newton, Iowa	12-22
1- 9	Water-works systems, Anna, Ill.	1- 5
1-10	Water-works, Brawley, Cal.	1- 5
1-10	Valves, Portland, Ore.	1- 5
1-10	Water-works, Onaga, Kan.	12-22
1-10	Pump house, etc., Fort Smallwood, Md.	12-22
1-10	Water pipe, Portland, Ore.	12-29
1-16	Water system, Masontown, Pa.	12-29
1-11	Water-works, Angola, N. Y.	12-15
1-11	Valves, hydrants, Kerrisdale, B. C.	1- 5
1-11	Water-works, Onida, S. Dak.	1- 5
1-13	Hydrants, valves, Spokane, Wash.	1- 5
1-16	Well, etc., Faribault, Minn.	1- 5
1-16	Main, pipe, Pembroke, Ont.	1- 5
1-16	W.-wks. franchise, Dayton, Ky.	12-22
1-17	Water supply, Schuylkill Haven, Pa.	12-15
1-19	Water-works, filtration plant, Grand Rapids, Mich.	12- 8
1-19*	Pumps, Chicago, Ill.	1- 5
1-21	Water mains, Newburgh, Ohio	1- 5
1-23	Pipe, Astoria, Ore.	1- 5
1-26	Pump, Kansas City, Mo.	1- 5
2- 1	Water pipe, sewer pipe, Souris, Man.	12- 1
2- 6	Water-works, Rippey, Iowa	1- 5
2-24*	Earthwork, Belle Fourche, S. Dak.	12-29
3- 1	Water-works, Atlantic, Iowa	1- 5

Sewers.

1- 5	Sewage filtration plant, Guthrie, Okla.	1- 5
1- 6	Sewer, St. Louis, Mo.	1- 5
1- 6	Sewer, Buffalo, Wyo.	11-24
1- 9	Sewer, Aberdeen, S. Dak.	12-22
1-10	Sewers, Portland, Ore.	1- 5
1-12	Sewers, Brawley, Cal.	1- 5
1-13	Sewers, Minneapolis, Minn.	1- 5
1-16	Sewer, Cheotah, Okla.	12-29
1-17	Sewage disposal plant, Schuylkill Haven, Pa.	12-22
1-17	Sewers, Pottsville, Pa.	1- 5
1-17	Sewer, Brooklyn, Md.	1- 5
1-21	Sewers, Fordyce, Ark.	12- 8
1-28	Sewer, Syracuse, N. Y.	12-29
1-28	Sewer, Syracuse, N. Y.	1- 5

Streets and Roads.

1- 6	Cement walks, etc., Columbus, Ohio	1- 5
1- 6	Paving, etc., Columbus, Ohio	1- 5
1- 6	Improving road, Cincinnati, Ohio	1- 5
1- 6	Gravel, Savannah, Ga.	1- 5
1- 7	Gravel roads, Frankfort, Ind.	1- 5
1- 7	Gravel roads, Frankfort, Ind.	12-29
1- 9*	Highways, Albany, N. Y. (See proposal advertisements.)	12-22
1- 9	Street improvements, Azusa, Cal.	1- 5
1- 9	Rock road, Oskaloosa, Kan.	1- 5
1-10	Repairing pavement, Boston, Mass.	1- 5
1-10	Paving, etc., Palatka, Fla.	1- 5
1-11*	Grading, etc., Salem, N. J. (See proposal advertisements.)	12-22
1-11	Road, Rushville, Ind.	12-29
1-13	Curb, cement, etc., Minneapolis, Minn.	1- 5
1-16	Paving, Salem, Ore.	1- 5
1-16	Paving, Lakewood, Ohio	12-29
1-16	Drive impvts., Los Angeles, Cal.	12-22
1-16*	Sidewalks, etc., Paducah, Ky.	12-22
1-18	Grading, etc., Walla Walla, Wash.	1- 5
1-18	Graveling, Mt. Holly, N. J.	1- 5
1-20	Road extension, Cincinnati, Ohio	1- 5
1-20	Improving road, Cincinnati, Ohio	1- 5
1-21	Stone road, Alpine, N. J.	1- 5
1-23	Road improvements, Wetumpka, Ala.	1- 5
2- 1	Gravel road, Fowler, Ind.	1- 5

Miscellaneous.

1- 6	Chassis, Seattle, Wash.	12-22
1- 6	St. railway construction (Electric Railways), Columbus, Ohio	12-29
1- 6	Crushed stone, New Haven, Conn.	1- 5

Bids close.		Noted in issue of
1- 7	Dredging, Hawaii (U. S. Poss.)	10-27
1- 9	Tramway plant and equipment, England (Foreign)	11-17
1- 9	Fire protection, New York	12-29
1-10	Drainage ditch, Lake Arthur, La.	12-29
1-10	Battleship, Chile (Foreign)	12-29
1-10	Furnaces, etc., (garbage), N. Y.	12-22
1-10	Headgate, dam, Lamar, Colo.	1- 5
1-11	Refuse plant additions, etc., (garbage), Buffalo, N. Y.	1- 5
1-11	Dredge, etc., Toledo, Ore.	1- 5
1-11	Ditches, Webster City, Iowa	1- 5
1-11	Dam, sluiceways, Ottawa, Ont.	12-22
1-11	Air compressor plant, Pittsburg, Pa.	12-22
1-11	Wagon, Rock Island, Ill.	12-29
1-11	Dredge, Ottawa, Ont.	12-29
1-12	Metal vault linings, etc., N. Y.	12-15
1-13	Paving blocks, cement, etc., Minneapolis, Minn.	12-29
1-13*	Dredging, Newport, R. I.	12-29
1-13	Trolley hoists, Washington, D. C.	1- 5
1-13	Drainage, Fort Dodge, Iowa	1- 5
1-14	Ditch, Wapakoneta, Ohio	12-15
1-16	Wharf franchise, Martinez, Cal.	12-22
1-16	Wharf, stone approach, Ottawa, Ont.	12-29
1-16	Railroad (Railways)	1- 5
1-16	Auto engine and ladder truck, Tacoma, Wash.	1- 5
1-16	Drainage, Des Moines, Iowa	1- 5
1-16	Wharf, Leiche's Creek, N. S.	1- 5
1-17	Dredger, England (Foreign)	12-29
1-17	Metal superstructures for bridges, Uruguay, (Foreign)	11-17
1-18	Cement, Ann Arbor, Mich.	1- 5
1-18*	Dredging, rock removal, New York	1- 5
1-18	Extension of wharf, Shigawake, Que.	1- 5
1-18*	Dredge, etc., Vicksburg, Miss.	12-22
1-19	Water system, Douglas, Ariz.	1- 5
1-19	Oil storage tank, etc., Fort Mason, Cal.	1- 5
1-20	Electric cars (Elec. Rys.), New York, N. Y.	1- 5
1-20*	Pier, Philadelphia, Pa.	1- 5
1-20	Ditch, Moorehead, Minn.	12- 8
1-21*	Dredging, Stamford, Conn.	12-29
1-21	Dredging, filling, Minneapolis, Minn.	12-29
1-24	Steel rails, Ottawa, Ont.	12-22
1-24	Rebuilding wharves, etc., Philadelphia, Pa.	12-22
1-24	Pump and boiler repairs, etc., Chile (Foreign)	1- 5
1-26*	Bank protection, Savannah, Ga.	12-29
1-26*	Steel barges, New Orleans, La.	12-29
1-27	Life-saving station, Eagle Harbor, Mich.	12-29
1-30	Breakwater, Port Burwell, Ont.	1- 5
1-30*	Telephone system, West Point, N. Y.	1- 5
2- 6	Torpedo boats, Washington, D. C.	12-15
2- 7*	Dams and canals, Porto Rico (U. S. Poss.)	12-22
2-15	Steel steamer, Ottawa, Ont.	12-29
2-22	Steel tramway plates, Australia (Foreign)	12- 8
2-25	Machinery for gate valves, etc., Panama (U. S. Poss.)	1- 5
2-28	Elec. pumping machinery, Australia (Foreign)	12-29

Examinations.

Examination date.		Noted in issue of
1-18	Ultraviolet Microscope Operator, Washington, D. C.	12- 8
1-18	Assistant Engineer in Forest Products, Wash., D. C.	12-22
1-28	Asst. in tobacco investigations, Wash., D. C.	12-29
2- 3	Asst. engineer, New York, N. Y.	12-29
2- 3	Assistant engineer, New York, N. Y.	1- 5
2- 7	Assistant Classifier, Washington, D. C.	1- 5
2- 8	Assistant Physicist, Wash., D. C.	12-22
2- 8	Assistant Curator, Wash., D. C.	12-22
2- 8	Preparator, Division of Technology, Wash., D. C.	12-29
2- 8	Topographic Aaid, Washington, D. C.	12- 8
2- 9	Asst. Geologist, Washington, D. C.	12- 8
2- 9	Junior Topographer, Washington, D. C.	12- 8

CURRENT PRICES OF ENGINEERING MATERIALS

Supplement to ENGINEERING NEWS, appearing in the First Issue of Each Month. New York, January 5, 1911.

PRICE CHANGES AND THE BUSINESS OUTLOOK.

A deadlock in prices has been in evidence for at least three months. Consumers, finding their business falling off, have been endeavoring to secure lower quotations from manufacturers. The manufacturers have been unable to make any reduction on account of the high cost of raw materials. The volume of business has been falling off week by week, and now the cost of production is slightly less, measured by the cost of raw materials and labor alone, for the efficiency of labor has slightly improved.

An open market for cement seems likely. There has been much unrest for months, and on Jan. 3 some of the companies announced they would pay 10 cts. each for each bag returned. This, in fact, amounted to a cut of 10 cts. per bbl. Other companies later in the day made a straight cut of 5 cts. per bbl., in addition to the rebate.

The manufacturers of steel and steel products have, for the most part, successfully resisted all efforts to cut prices. Whether it will be more expedient to cut prices now or to let the market drift is the greatest problem now before the steel trade. An important "dinner" will be held this month and some results are looked for as the outcome of this meeting.

Economy in Federal, State and Municipal expenditures is receiving more attention than before in a decade. A newly inaugurated Governor of an Eastern state makes that the watch word of his inaugural address. The President of the United States has accomplished much in this direction and still greater enonomies are being sought. The judicious expenditure of money to accomplish the greatest results is the peculiar province of the engineer, and while this curtailment may lessen the amount of construction work for a time, it will in the long run conserve funds for still greater improvements.

The compensation of labor is one of the problems before the industrial world. There is no present necessity to cut wages; neither is there any likelihood of an executive order being given out to large employers of labor that wages must be maintained. If the demand for labor continues to decrease in the next six months as it has in the last three months there is little likelihood tained. The laborers themselves will be the first to request that eleven men be given the work and the same wages as ten, and with the new order the amount of work done will be vastly increased. Railway earnings are holding up surprisingly well and there is no doubt that when the rate question is settled, railway executives will put in operation many needed improvements.

The demand for strictly high-grade securities has improved and municipalities are now finding it comparatively easy to sell their bonds.

Important projected work includes a proposition to build a $10,000,000-railway in Panama, the construction of an expensive, 300-mile railway extension in Alaska, and the electrification of the Pennsylvania lines in and around Philadelphia, including numerous additions. A large hotel has been contracted for in New York which will cost more, including the real estate than any similar structure.

In the South and Far West are many schemes for railway development. The Lopuisville & Nashville is making numerous improvements. The Harriman lines on the Pacific coast are making frequent additions.

LABOR.

More men are seeking work than any time since the business revival commenced after the depression of 1907. A leading employment agency states that the calls for laborers during December, 1910, were 75% less than in the corresponding month the previous year. It is an easy matter to find 25 to 50 laborers who are willing to pay their fare to nearby States at the promise of steady employment. Not only is the field of common and out-door labor oversupplied, but factory help is easy to obtain, and managers are discriminating carefully when taking on new employees.

A similar situation is observed in the field of railroad employment. There is no doubt that the traffic is heavy, but the railways have a long list of applicants to choose from. In the line of skilled labor, such as machinists, conditions are little changed from a month ago. First-class men, all-around machinists, are not looking for work, but the supply of poor help and young men with a little experience on one or two machine tools is exceedingly large. Strikes have been less frequent.

Steamships going to the south of Europe are carrying a heavy load of steerage passengers, more than usual at this season of the year. Many Italians and Greeks, who had intended to stay in this country for a year or so, are going back to Europe to await more favorable news regarding employment in this country. No cuts have been made in wages, but $1.60 a day is the ruling rate for pick and shovel men on dry work, and $1.75 on wet work.

In manufacturing establishments, the reduction in the number of employees has been large. The steel companies are credited with having laid off a great number of men, and they must have, considering the remarkable falling off in the output of steel. While no cuts have been made, it is evident the efficiency of the men working has been greatly increased, and this is something which managers of large enterprises have been endeavoring to do for several years. It is probable no attempts will be made to reduce wages, but that the cost of production will decrease, owing to the higher efficiency of labor. This is particularly true in machine-shop practice and in foundry work. In the building trades the number of idle workmen is also large.

The monthly bulletin of the Department of Commerce and Labor on the immigrant movement into the United States shows that in November 74,353 aliens entered the country, that representing a decline of 9,452 from October, and 10,696 from November, last year.

A monthly record of the country's immigration is as follows:

	1910.	1909.	1908
December	.....	68,711	46,003
November	74,353	85,049	37,076
October	83,805	75,608	40,994
September	83,931	67,619	38,338
August	78,574	59,777	27,782
July	73,153	66,218	27,570
June	105,025	85,470	31,947
May	133,544	107,939	36,317
April	135,052	116,754	41,274
March	136,745	113,038	32,517
February	57,980	67,154	23,381
January	50,242	43,868	27,220

CEMENT, LIME AND BRICK.

PORTLAND CEMENT.—Cement manufacturers are not having the easy time they anticipated. It was thought, with the entering of the banking house of J. P. Morgan & Co. into the cement trade that the small producers would obediently bow to the dictation of the large producers of the Lehigh Valley. Some of them have been very stubborn, so the leaders of the industry think, and apparently want to conduct their own business. This has led to the threats of a price war, and the opinion is freely given that there may be a quick, short and sharp cut in prices, which will bring the quotation for cement down to a figure lower than has ever been seen. Production is still in excess of consumption, and consumption has declined more than usual at this time of year, for there is less construction work under way, and, moreover, the cold weather for the last 40 days has practically put a stop to all new out-door work. On Jan. 3, prices were cut 5 cts. per bbl., and in addition the rebate for bags returned was increased 2½ cts. per bag or to 10 cts. The following quotations were named at various cities before the cut was announced Prices are now unstable: Boston, $1.62; Buffalo, N. Y., $1.60; New York, $1.53; Philadelphia, $1.50; and Atlanta, Ga., $1.35, net. On the Pacific Coast, $2.20 to $2.50 per bbl. is named. Eastern prices represent a quotation of about 90 cts. per bbl. in bulk at the mill.

Imported cement is in light demand, at $2.42 for Alsen's and $2.43 for Dyckerhoff's.

NATURAL CEMENT.—Prices are steady, and the demand is limited. In New York, natural cement is unchanged, at 80 cts. per bbl., and in Boston at $1.05.

LIME.—The following prices are for lots of 500 bbls., delivered in New York City: State common, per bbl., 75 cts.; Rockland-Rockport common, 92 cts.; Rockland-Rockport special, 300 lbs., $1.37; finished, 300 lbs., $1.47; finishing, 200 lbs., $1.02, and 350 lbs., $1.62; New Milford, $1.30.

BRICK.—The past year has been an unsatisfactory one for the makers of brick. The demand has been less, and the productive capacity of the Hudson River yards has increased. Prices are steady, at $5 for Hudson River common, and $5.25 for Raritan River. In Boston, local brick are held at $8.50, while those brought from New York can be had at $7.25.

White enameled brick are held at the unchanged price of $60 per thousand for the American size (8¾ × 2¼-in. enameled surface by 4⅛-in. bed), and $70 to $75 for the English size (9 × 3-in. enameled surface by 4½-in. bed). These prices are f. o. b. Perth Amboy.

PLASTER BLOCKS.—For large lots, prices are as follows:

	Weight, lbs. per sq. ft.	Price, cts. per sq. ft.
2-in.	7	6
3-in.	8½	6½
4-in.	11	7¼

These blocks are made 32-in. long by 13½-in. wide, containing 3 sq. ft. of surface. The 2-in. blocks are solid, but the others are hollow.

Plaster boards, ⅝-in. thick, are 16 cts. per sq. yd.

STONE.

BLUESTONE.—Dealers in bluestone have had a more satisfactory season than expected. The demand for curbing and bridging has been especially good. Flagging has lagged, it is true, yet the demand has been very fair. Prices continue without change, and for delivery, either alongside of dock or f. o. b. cars, New York, are as follows: Flagging, 6 cts. per sq. ft. per in. of thickness; flagging, 2¼ to 3-in. thick, that will pass New York City specifications, 18 to 19 cts. per sq. ft.

Sewer bottoms, 5 ft. sq. and 3-in. thick, are sold at 25 cts. per sq. ft. Curbing, 5 × 16-in., is 40 cts., and 5 × 24-in., by 5-in. thick, is 60 cts., and 6-in. thick is 65 to 70 cts. per lin. ft., 5 × 20-in. by 5-in. thick is 50 cts.

Promiscuous shapes of building and foundation stone sell at 70 to 75 cts. per sq. ft.

GRANITE.—There is little new building going on in New York City calling for granite, and the demand, in consequence, is light. Prices are without change at 40 to 45 cts. per cu. ft. for promiscuous shapes or run of quarry.

Pink Milford granite is unchanged at $1.00 per cu. ft. for promiscuous shapes.

LIMESTONE.—Outside of New York, there is quite a little work going on calling for limestone, but in the metropolitan district the demand has fallen off to such an extent that several yards remained closed during the last season.

Prices are unchanged at 85 cts. per cu. ft., delivered alongside of dock, New York. Dressed stone is quoted at $1.25 to $1.50 per cu. ft.

Sandstone in the rough is 80 cts. to $1.00 per cu. ft.

INTERIOR STONE.—Slate flooring, 1-in. thick, can be had at 20 cts. per sq. ft. for the common or ribbed variety. Clear black sells at 35 to 40 cts., and the same price is asked for Vermont. A combination of slate and marble flooring is 30 cts. per sq. ft.

Marble floor, finished ready to lay, of Vermont marble, is 50 to 70 cts. per sq. ft.; Italian marble, 70 to 90 cts. Tennessee marble can be had at 65 cts. Ordinary stair work, such as slate steps, are quoted at 24 cts. per sq. ft.

CRUSHED STONE, SAND AND GRAVEL.

CRUSHED STONE.—Operations in the crushed stone line have been suspended for the season, and no more stone will be shipped on the Hudson until the ice breaks up in the spring. Prices are without change from last month, as follows:

For 1½-in. stone, 90 cts. to $1.00 a yd. is quoted; ¾-in. stone, 95 cts. to $1.10, and screenings are also sold at 95 cts. to $1.10. These prices are for full cargo lots of 500 cu. yds., delivered alongside of dock, New York City.

In Boston, the following prices are quoted, f. o. b. cars at point of shipment, per net ton: 2½-in., 65 cts.; 1½-in., 75 cts.; ¾-in., 90 cts.

SAND.—The leading dealers in sand have revised their quotations effective Jan. 1, and are now quoting Long Island washed sand at 25 cts. per cu. yd. The demand for sand has been excellent all through the season, and dealers have been able to deliver promptly as needed. For the last six weeks the weather has been too cold to permit of much out-of-door construction. Other grades of sand are unchanged, as follows:

White quartz sand is 60 cts. per cu. yd., and white quartz grit, 75 cts. per cu. yd. All of these prices are for delivery alongside of dock, New York, and for full cargo lots of 500 yds.

In Boston, sand sells at 35 cts. per cu. yd., to which is added the freight of about 50 cts.

GRAVEL.—The season is practically closed, and only a little gravel is now being used. While it was expected that prices would be revised around Jan. 1, there has been no reduction announced as yet, the best grades of washed gravel being obtainable at 75 to 85 cts. per cu. yd. (These prices are for cargo lots of 500 yds., delivered alongside of dock, New York City.

White quartz roofing gravel is $1.25 to $1.35 per net ton.

IRON AND STEEL.

PIG IRON.—The demand continues to contract and the sales being made are not only confined to nearby requirements, but in most instances are smaller than the previous month. The blast-furnace interests continue to restrict production, and it is probable that the statement of production compiled for December will show another substantial decrease in output. Manufacturers of basic iron are endeavoring to form a company to handle the output, but those who are in a position to know the most about such affairs do not think such a scheme can be put through at this time. While some especially low prices have been named by those furnace interests who wish to dispose of large stocks to secure ready cash, there has been no price-cutting, and quotations show little change from those of last month.

Iron production during the month of November fell off, and for the first time in sixteen months was below 2,000,000 tons. The output for the year 1910, however, will break all records.

As stated, price changes during the month have been within narrow limits. For lots of 100 gross tons and over, f. o. b. points named, quotations are as follows: Cincinnati, Southern foundry No. 1, $14.75 to $15.25; Southern foundry No. 2, $14.25 to $14.75; Southern foundry No. 4, $13.50 to $14. In Philadelphia, Eastern Pennsylvania No. 2 is $15.50 to $15.75; Eastern Pennsylvania No. 2 plain, $15 to $15.25. In Chicago, Northern foundry No. 2 is $16 to $16.50; Southern foundry No. 2 is $15.35 to $15.85. In Pittsburg, Bessemer is unchanged at $15.90, and basic is likewise unchanged at $14.15. These prices include the 90 ct. freight rate from the Valley to Pittsburg. In New York, Northern foundry No. 2X is $15 to $15.25; Southern foundry No. 2 is $15.25 to $15.50. In Birmingham, Southern foundry No. 2 is unchanged at $11.50 to $12.

STEEL RAILS.—The principal contracts pending are those of the Pennsylvania and New York Central railroads for 150,000 tons each. The specifications on these rails are somewhat rigid, and it remains to be seen whether the manufacturers are willing to accept them. The actual buying of rails during the month was small, few new contracts being made.

All rails are now quoted in cents per pound, the quotation being as follows for lots of 500 tons and over; Standard sections, 50 to 100-lbs., per yard, 1.25 cts. per lb.; 40 to 45-lbs., 1.16 cts.; 30 to 35-lbs., 1.20 cts.; 16, 20 and 25 lbs., 1.21 cts.; and 12-lb. rails, 1.25 cts. Relaying rails are unchanged in New York, at $20.50 to $21.50 per gross ton. In Chicago, standard sections, subject to inspection, are $24 to $25 per ton.

TRACK SUPPLIES.—Business has been more satisfactory during the last month. The "Iron Age" states that the Carnegie Steel Co. has sold 5,000 heavy I-beam steel ties for export. The Louisville & Nashville is reported to be in the market for 50,000 pairs of splice bars.

Prices are as follows: Standard railway spikes, 4½ × 9/16 in. and larger, are 1.50 to 1.60 cts. per lb. Boat spikes and small railway spikes are 1.60 to 1.65 cts. Track bolts with square nuts are 2.40 to 2.50 cts. per lb., and angle bars, 1.50 to 1.65 cts. per lb. in Chicago and Pittsburg.

STRUCTURAL SHAPES.—Independent steel makers are dissatisfied with the amount of business they are getting, but for the most part, quotations have been held firm. Another of the Gary dinners will be held on Jan. 11 to talk over the situation. Certain independent interests, however, are reported as saying that if they do not get business by the middle of the month they will go after it. The smallest steel makers are not especially anxious to get in a price war; they have had one or two very lasting impressions of the power of a big corporation to retaliate, and do not wish to again run amuck. On the other hand, it remains to be seen whether the U. S. Steel Corporation can of itself hold prices, or whether, if it could, it would be the best policy to do so. There will be a good deal of structural material purchased for Canadian work during this year. In Vancourver, steel work is contemplated, calling for 35,000 tons. The Quebec Bridge contract has not yet been awarded, and there is much building going on in Montreal. There has been, lately, a greater demand for cars than at any other time in the last six months. These take the form of inquiries. Few of them, however, are turned into orders, but the car business promises to be better.

Prices are without change. The following quotations are named in cts. per lb., f. o. b. Pittsburg: I-beams and channels, 3 to 15-in., 1.40 to 1.45 cts.; over 15-in., 1.55 cts.; H-beams, over 8-in., 1.65 cts.; angles, 3 to 6-in., inclusive, 1.50 cts.; angles over 6-in., 1.55 cts.; zees, 3-in. and over, 1.50 cts.; angles, channels and zees under 3-in., 1.45 base and full extras; deck beams and bulb angles, 1.75 cts.; hand rail tees, checkered and corrugated plates, 2.75 cts.

Chicago store prices in cents per lb. are as follows: Angles, 3 to 6-in., 1.80 to 1.90 cts.; over 6-in., 1.90 to 2 cts.; I-beams and channels, 1.80 to 1.90 cts. In San Francisco, prices from store continue without change at 2.70 cts. base.

CAST IRON PIPE.—The demand for cast iron pipe has improved considerably. The leading maker has booked 15,000 tons in December. On the Pacific Coast awards will be made in February for 24,000 tons of water pipe in Portland and California points, and also 12,000 tons of gas pipe. In the Eastern markets, the demand has been limited. Quotations are unchanged from last month as follows:

Birmingham, Ala., 4 to 6-in., $21; 8 to 12-in., $20; over 12-in., $19.

Chicago, 4-in., $27; 6 to 12-in., $26; 16-in. and larger, $25.

New York, 6-in., $22.

OLD MATERIALS.—While there has been some foreign inquiry, no actual transactions have been made for export. It is likely, however, should the market decline any further the foreign makers will come into the market and buy, the amount of their purchases being limited only by the price of material. This is fairly satisfactory to the scrap dealers, for it puts, so to speak, a lower limit on the price of scrap. Should any

transactions be made they will furnish a basis for credit. During the depression following the panic of 1907 there was a great deal of export business transacted in old car wheels, especially to Canadian points.

Prices in New York per gross tons are as follows: Re-rolling rails, $10.50 to $11; heavy melting steel scrap, $10 to $10.50; No. 1 yard wrought, $10 to $11; No. 1 Railroad wrought, $12 to $12.50; pipes and flues, $9.50 to $10; cast borings, $5.50 to $6; machinery cast, broken up, $11.50 to $12; stove plate, $9.50 to $10.

In the Chicago market trade is also quiet, but the nominal quotations are considerably lower than a month ago. Quotations per gross are reported as follows: Re-rolling rails, $14 to $14.50; heavy melting steel scrap, $12 to $12.50; shovelling steel, $11.50 to $12. For such materials as are sold by the net ton prices are as follows: Miscellaneous Railroad wrought, $10.50 to $12; machine shop turnings, $6.50 to $7; No. 1 cast scrap, $12.25 to $12.75; pipes and flues, $8.75 to $9.25; railroad malleable, $11 to $11.50; agricultural malleable, $10.50 to $11.

In Pittsburg quotations per gross ton are as follows: Re-rolling rails, $14.75 to $15; No. 1 foundry cast, $13.50 to $13.75; No. 2 foundry cast, $12.75 to $13; old grate bars, $11.25 to $11.50; car wheels, $13.50 to $13.75; cast borings, $8; machine shop turnings, $8.50 to $8.75; bundled steel scrap, $9.

PLATES.—The demand for plates is small but there are a number of car orders in the market. There is no doubt that these will be turned into orders and will, of course, call for a large tonnage of plates. Ship building work on the Great Lakes is at a standstill. Some Government work is in sight, but these contracts have not yet been awarded.

Prices are unchanged at 1.40 cts. base for wide plates, although some narrow plates have been sold on a basis of 1.35. Plates ¾-in. thick, 6¼ to 100 ins. wide, 1.40 to 1.45 cts.; ¼ to 3/16-in. thick, 1.50 to 1.55 cts.; 3/16-in. and thinner, including No. 8 gage, 1.55 to 1.65 cts.; Nos. 8, 9 and 10 gage, 1.70 to 1.75 cts. All these prices are per lb. f. o. b. mill.

In Chicago store prices are 1.85 to 1.95 cts.

PILING, SHEET STEEL.—Prices are without change at 1.60 cts. per lb. f. o. b. Pittsburg.

STEEL CASTINGS.—Prices continue without change. Open hearth steel castings, weighing from 100 to 500 lbs., are 3½ to 5 cts. per lb. Crucible castings, weighing from 100 to 500 lbs., are 7½ to 9 cts. per lb.

RIVETS.—At a meeting of rivet makers held in New York, N. Y., late in December prices were reaffirmed as follows: Structural rivets, ¾-in. and larger, 1.90 cts.; base; cone head boiler rivets, ¾-in. and larger, 2 cts., base; ⅝-in. and 11/16-in. take an advance of 15 cts., and ½-in. and 9/16-in. take an advance of 50 cts. Lengths shorter than 1-in. also take an advance of 50 cts. Terms are 30 days, net cash, f. o. b. mill.

CASTINGS, GREY IRON.—Business is very quiet. Building castings can be easily obtained at 1¾ to 2 cts. per lb. Some orders have been placed as low as 1⅝ cts. Stair work is 2 to 2½ cts. per lb. Heavy footings, manhole covers and street castings are 1½ to 1¾ cts. per lb.

FREIGHT RATES.—The freight rates, on finished steel products, from the Pittsburg district, including plates, structural shapes, merchant steel and iron bars, pipe, fittings, plain and galvanized wire, nails, rivets, spikes and bolts (in kegs), black sheets (except planished), chain, etc., are as follows, in cts. per lbs.: Albany, 16; Buffalo, 11; Boston, 18; Baltimore, 14½; Canandaigua, 13½; Cleveland, 10; Columbus, 12; Cincinnati, 15; Chicago, 18; Harrisburg, 14½; Louisville, 18; New York, 16; Norfolk, 20; Philadelphia, 15; Rochester, 11½; Richmond, 20; Scranton, 15; St. Louis, 23; Washington, 14½.

WIRE ROPE.—Prices are unchanged from last month. The discount to the larger trade being 42½ and 5% from list for galvanized, and 50 and 5% from list for bright. The net prices of bright wire rope are as follws:

Diameter, inches.	Price per foot — Cast steel.	Crucible steel.	Plow steel.
2¾	$1.05	$1.24	$1.46
2¼	.85	1.05	1.22
2	.57	.65	.76
1¾	.44	.54	.64
1½	.32	.39	.45
1¼	.23	.28	.32
1	.15	.18	.21
¾	.10	.11	.13
⅝	.07	.09	.10
½	.06	.07	.07

ROOFING, CORRUGATED.—The demand is light. Quotations are unchanged and per 100 sq. ft., of roof surface are as follows: Carloads, Pittsburg, No. 28 painted, $1.55; No. 28 galvanized, $2.75. From store New York, No. 24 painted, $3.60; No. 24 galvanized, $4.50; No. 26 painted, $2.75; No. 26 galvanized, $3.75; No. 28 painted, $2.40; No. 28 galvanized, $3.50.

SHEETS.—The market is steadier and business is of a larger volume due to the absence of cutting. While the makers of sheets do not anticipate any great increase in the demand they are pleased that business is keeping up as well as it is.

The following quotations are named: f. o. b. mill in the Pittsburg district.

	Cts. per lb. — Black.	Galvanized.
Nos. 10 and 11	1.85	2.20
Nos. 12, 13 and 14	1.90	2.30
Nos. 15, 16 and 17	1.95	2.45
Nos. 18, 19, 20 and 21	2.00	2.60
No. 22	2.05	2.60
Nos. 23 and 24	2.05	2.70
Nos. 25 and 26	2.15	2.90
No. 27	2.20	3.05
No. 28	2.20	3.20
No. 29	2.25	3.30
No. 30	2.25	3.50

Store prices Chicago are as follows:

	Cts. per lb. — Black.	Galvanized.
No. 10	2.40	2.95
No. 12	2.40	
No. 14	2.45	
No. 16	2.55	3.05
Nos. 18 to 22	2.70	3.20
No. 24	2.75	3.30
No. 26	2.85	3.50
No. 27	2.95	3.65
No. 28	3.15	3.80
No. 30	3.35	4.25

MERCHANT PIPE.—Some shipments are being made to the oil fields in California, but otherwise the demand is light.

Discounts are unchanged as follows:

	Black.	Galvanized.
¾ to 1½-in. Butt wield	79	69
2-in. Lap weld	76	66
2½ to 4-in. Lap weld	78	66
4½ to 12-in. Lap weld	77	67

At these discounts the net prices of pipe per ft. are as follows:

	Steel Pipe in Cts. per ft. f. o. b. Mill — Black.	Galvanized.
¾-inch	2.43	3.58
1 -inch	3.47	5.12
1¼-inch	4.74	7.00
1½-inch	5.69	8.35
2 -inch	8.65	12.20
2½-inch	12.70	19.80
3 -inch	16.60	25.60
4 -inch	23.70	36.70
5 -inch	33.40	48.00
6 -inch	43.20	62.00
7 -inch	54.00	78.00
8 -inch	65.00	93.00
9 -inch	78.00	112.00
10 -inch	92.00	132.00
11 -inch	104.00	149.00
12 -inch	114.00	162.00

TIN PLATE.—Most of the large consumers of bright plate have entered their orders for the next season's requirements. The terne plate trade is duller than usual.

Terne plates or tin plates used for roofing purposes are sold by the box of 112 sheets. Store prices in New York are without change at $8.50 per box for 20 × 28-in. I C plates with an 8-lb. coating; plates of the same size with a 15-lb. coating are $10.40; 20-lb. coating, $13 and 40-lb. coating, $16.50.

BARS AND MERCHANT SHAPES.—The demand continues fair. Prices are steady and firm, the following being named from New York store:

	Cts. per lb.
1 to 1⅞-in. round and square	1.90
1½ to 4-in. × ⅜ to 1-in.	1.90
1½ to 4-in. × ¼ to 5/16-in.	2.10
Rods—⅝ and 11/16 round & square	2.10
Angles:	
3-in. × ¼-in. and larger	2.10
3-in. × 3/16-in. and ⅛-in.	2.35
1½ to 2½-in. × ¼-in.	2.35
1½ to 2¾-in. × 3/16-in. & thicker	2.10
1 to 1¼ × 3/16-in.	2.25
⅞ × ⅛-in.	2.40
¾ × ⅛-in.	2.50
⅝ × ⅛-in.	3.55
½ × 3/32-in.	4.35
Tees:	
1-in.	2.65
1¼-in.	2.45
1½ × 2½ × ¼-in.	2.15
1½ × 2½ × 3/16-in.	2.35
3-in. and larger	2.15
Beams	2.10
Channels, 3-in. and larger	2.10
Bands—1½ to 6 × 3/16 to No. 8	2.35
Norway bars	3.60
Bessemer Machinery, Steel	1.90
Cast steel, base	7.00
Special cast steel, base	14.00 to 15.00

LAG SCREWS.—Quotations are without change. Cone point lag screws are sold at a discount of 75 and 10% from list. Net prices are as follows:

	Net price per 100 — ¼-inch.	⅜-inch.	1-inch.
3½-inch	$1.17	$2.40	$5.00
4 -inch	1.25	2.55	5.25
4½-inch	1.33	2.70	5.50
5 -inch	1.40	2.85	5.80
6 -inch	1.58	3.20	6.40
7 -inch	1.73	3.50	7.00
8 -inch	1.82	3.85	7.60
9 -inch	2.05	4.10	8.20
10 -inch	2.25	4.45	8.75
11 -inch	2.40	4.70	8.30
12 -inch	2.60	5.00	9.90

CHAIN.—The following quotations are named on chain. Prompt shipments can be made.

Prices are without change per 100 lbs. f. o. b. Pittsburg, as follows:

Sizes in inches.	Proof.	BB.	BBB.
3-16	$8.25	$9.50	$10.00
¼	5.70	6.95	7.45
5-16	4.70	5.95	6.45
⅜	4.15	5.40	5.90
7-16	3.85	5.10	5.60
½ and 9-16	3.65	4.90	5.40
⅝	3.55	4.80	5.30
¾	3.45	4.70	5.20
⅞	3.35	4.60	5.10
1	3.25	4.50	5.00
1¼ and 1⅛	3.35	4.60	5.10

Hand-Made Chain.

Size in inches.	BBB crane chain.	BBB crane, dredge hoisting or steam shovel hoisting chain.	Special "Warwick" crane, hoisting steamshovel hoisting and dredge hoisting chain.	Special "Trident" crane, steam shovel hoisting & dredge hoisting chain.
⅝	$7.95	$8.20	$9.15	$9.15
¾	7.15	7.45	8.45	8.45
⅞	7.67	6.90	7.95	....
1	6.15	6.40	7.45	....
1⅛	5.75	5.95	6.90	....
1¼	5.65	5.90	6.85	....
1⅜ to 1⅞	5.55	5.75	6.80	....

COKE.—Several large contracts have been made for coke and this has resulted in a better feeling in the coke trade. "The Iron Age" says:

A movement is under way by some of the Uniontown, Pa., coke concerns to form a central selling agency to handle the output of coke of a number of the smaller coke operators, and a charter has been applied for for the Fidelity Coal & Coke Co., with a capital of $300,000, and which it is said will handle the output of 7,000 ovens or more. Several of the leading cokemakers are not identified with this project, stating they prefer to handle their coke themselves.

The output is still falling off, the weekly make in the Upper and Lower Connellsville region being 292,000 net tons.

For prompt shipments of standard makes of furnace coke $1.40 to $1.50 is quoted. On contracts for the first half of the year, $1.75 to $2 is quoted. Foundry coke is slightly easier and 72-hr. foundry is sold at $1.90 to $2, at oven for prompt shipment and $2.25 to $2.50 on contracts running through the first half of the year.

SPIRAL RIVETED PIPE.—Prices continue unchanged from the last report. The prices given below are f. o. b. factory, freight equalized, with New York City being figured at a discount of 50, 10 and 10% from list. They are for orders amounting to about $250. For large orders, of several carloads, prices are from 12½% to 20% cheaper.

Diameter in ins.	*Thickness of steel, Birmingham wire gage.	Net price per 100 ft. With bolted joints complete. — Plain.	Asphalted.	Galvanized.
3	20	$21.80	$14.21	$20.70
4	18	19.76	21.48	30.74
5	18	23.40	23.70	37.14
6	16	33.05	35.76	49.73
7	16	37.58	40.76	56.82
8	16	43.17	46.80	65.00
9	16	50.06	54.10	74.22
10	14	66.42	71.08	96.15
11	14	71.20	76.57	102.24
12	14	83.75	89.15	118.32
13	14	89.67	96.55	127.98
14	14	99.14	105.51	138.85
15	14	108.05	114.89	151.92
16	14	117.53	124.82	166.58
18	12	167.43	175.95	226.44
20	12	183.79	193.30	248.39
22	12	200.48	210.64	269.21
24	12	219.92	231.07	293.99
26	10	280.26	292.41	370.78
28	10	301.32	314.89	395.37
30	10	324.81	339.15	430.64

*Made in both lighter and heavier gages at corresponding differences in price.

NAILS.—New orders are small, smaller even than usual at this time of year.

Prices are without change, wire nails in Pittsburg being held at $1.75 base in carload lots to retailers with an advance of 10 cts. for less than carload lots. In New York wire nails are sold from store at $2 per keg. Cut nails are held at $1.65 per keg in carload lots Pittsburg, and $2 per keg from store New York. All of these prices are per 100 lbs.

WIRE.—Fence wire is more active and in very good demand in the West.

Quotations on plain wire are as follows: Carloads, annealed, $1.50; galvanized, $1.80. Less than carload lots are held at an advance of 10 cts. per 100 lbs. over these prices. Barbed wire in carload lots is $1.70 for the painted and $2 for the galvanized. An advance of 10 cts. per 100 lbs. is also charged for less than carload lots. Prices named are per 100 lbs. at mill in the Pittsburg district.

SWEDISH STEEL. — Business is quiet. Prices are without change. Drill steel, either round, hexagon or octagon, is 6 cts. per lb. for all sizes ⅝ to 2 ins. For sizes 2⅛ to 3 ins. 7 cts. is quoted and 3⅛ to 4 ins. is 7½ cts.

Hollow drill rod is held at 12½ to 15 cts. for the imported.

Anvils of Swedish steel are held at 9 to 9½ cts. per lb. They weigh from 80 to 600 lbs.

SWITCH POINTS.—The following prices are named, f. o. b. mill for switch points in lots of ten or more pair: For 60-lb. rail, 10-ft. points, $16.25; 15-ft. points, $17.50 for 70-lb. rail, 10-ft. points, $18; 15-ft. points, $25; for 80-lb. rail, 10-ft. points, $25.50; 15-ft. points, $27.75; for 90-lb. rail, 15-ft. points, $30.50; for 100-lb. rail, $33.50. All of the above are furnished with three rods, except the 10-ft. points for 60 or 70-lb. rail, which have only two.

BOLTS.—Prices are without change. The discount on common carriage bolts, to the retail trade and large consumers is 70 and 7½% from list, on bolts ⅜ × 6 ins., and smaller. The lowest price is 65 and 5% discount for larger and longer bolts. Net prices are as follows:

Length in inches.	Diameter in inches — Net price per 100. ⅜	½	¾
4	$0.74	$1.22	$2.86
5	0.83	1.36	3.15
6	0.92	1.52	3.50
7	1.22	1.65	3.75
8	1.34	1.80	4.25
9	1.45	1.95	4.50
10	1.55	2.20	4.75
12	1.75	2.40	5.25
14	1.90	2.70	5.90
15	2.05	2.85	6.25
18	2.40	3.25	7.20
20	2.60	3.50	7.75

FROGS.—For mill shipments, of ten or more, prices are as follows: Bolted frogs No. 7, for 60-lb. rail, $15; for 70-lb. rail, $16.50; for 80-lb. rail, $18; No. 8 frogs for 90-lb. rail, $21; for 100-lb. rail, $23. Plate frogs No. 7, riveted to ⅝-in. plate for 60-lb. rail, $18; for 70-lb. rail, $20; for 80-lb. rail, $21.50. No. 8 frogs bolted to a ¾-in. plate for 90-lb. rail are $25.50; for 100-lb. rail, $27.50.

REINFORCING MATERIAL[illegible]

TRIANGULAR MESH.—The de[illegible] continues good. Shipments are now b[illegible] made promptly.

The following quotations are f[illegible] lots of the size named f. o. b. mill[illegible] Pittsburg district:

Style No.	Cross sec. area per ft. width	Price per 100 sq. ft. — Carload lots.
4	.102	$1.03
5	.077	.82
6	.058	.65
7	.041	.50
23	.170	1.73
24	.142	1.48
25	.124	1.32
26	.110	1.20
27	.085	.98
28	.066	.81
29	.049	.67
31	.261	2.55
32	.225	2.20
33	.196	1.96
34	.146	1.51
35	.109	1.20
36	.075	.89
38	.380	3.62
39	.325	3.12
40	.283	2.74
41	.208	2.08
42	.151	1.58
43	.101	1.13

This material is made in regular w[illegible] of 18, 22, 26, 30, 34, 42, 46, 50, 54 [illegible] 58 ins. Standard lengths of rolls are [illegible] 300 and 600 ft. Cutting to special le[illegible] is charged extra.

BARS, CONCRETE REINFORCING[illegible] While bars in general are in only a limited [illegible]mand those for reinforcing purposes are [illegible]tive. Prices are steady at 1.40 cts. base Pi[illegible]burg.

The following quotations are based on a price of 1.45 cts. Pittsburg:

	Cts. per lb. — Plain.	*Deformed.
¾-inch and larger	1.40 to 1.50	1.45 to 1.55
⅝-inch	1.45 to 1.55	1.50 to 1.60
½-inch	1.50 to 1.60	1.55 to 1.65
⅜-inch	1.65 to 1.75	1.70 to 1.80
¼-inch	1.90 to 2.00	1.95 to 2.05

Bar from stock Pittsburg are usually cut to the required length without extra charge. Prices per lb. are as follows:

	Cts. per lb. — Plain.	*Deformed.
¾-inch and larger	1.60 to 1.70	1.70 to 1.80
⅝-inch	1.65 to 1.75	1.75 to 1.85
½-inch	1.70 to 1.80	1.80 to 1.90
⅜-inch	1.85 to 1.95	1.95 to 2.05
¼-inch	2.10 to 2.20	2.20 to 2.30

*The price of deformed bars varied according to the shape and some are held much higher than these prices.

EXPANDED LATH.—Prices are unchanged. The price for carload lots given below is f. o. b. mill Central Ohio:

Carload Lots. Price in cts. per sq. yd.

Gage.	Weight per sq yd.	Black.	Painted.	Galvanized.
27	2¼ lbs.	11½	12¼	17½
26	2½ lbs.	12½	13¼	18½
25	2 lbs.	13½	14¼	19¼
24	3.4 lbs.	14½	15¼	20½

Small Lots from New York, Store.

Prices in cents per sq. yd.

27	13	13¾	19
26	14	14¾	20
25	15	15¾	21
24	16	16¾	22

This lath is packed 9 sheets to the bundle.

DIAMOND LATH FROM STORE.

Designation.	Gage.	Weight per sq. yd.	Price. Per sq. yd. Black, cts.
A	24	4 lbs.	20
A Special	24	4 lbs.	18
B	27	2.9 lbs.	16½
B Special	27	2.9 lbs.	15
B B	27	2.33 lbs.	14
Square Twist	24	4 lbs.	20
Diamond No. 24	..	3.75 lbs.	20
" No. 24 Special	..	3 lbs.	16½
" No. 26	..	2.66 lbs.	16½
" No. 26 Special	..	2.1 lbs.	14
Square Twist No. 27	..	2.75 lbs.	14½

INTERLOCKING PLATES.—For interlocking steel plates, of 24 gage black steel f. o. b. mill Central Ohio, the following prices are named:

Length.	Per 100 sq. ft. Weight.	Price. Flat Sheets.
Under 4 ft.	100 lbs.	$11.00
4 to 6 ft.	160 lbs.	10.00
6 to 8 ft.	160 lbs.	9.50
8 to 10 ft.	160 lbs.	9.00
10 ft.	160 lbs.	8.50

Curved sheets are held at an advance of $1 per 100 sq. ft. over flat.

EXPANDED METAL. — Prices continue steady. The following prices are for small lots from the warehouse, either New York or Pittsburg. Material concessions, however, would be made for large orders:

Mesh., ins.	Gage (Stubs).	Section in sq. in. per ft. width.	Weight, in lbs., per sq. ft.	Size of Standard Sheets in ft.	Price per sq. ft.
½	18	.209	.74	8 × 3 or 6 ft.	5.
¾	13	.225	.80	6 × 8 or 12 ft.	6.
1½	13	.207	.70	4 × 8 or 12 ft.	5.
2	12	.166	.56	5 × 8 or 12 ft.	4.
3	16	.083	.28	6 × 8 or 12 ft.	2.
3	10	.148	.50	5.25 × 8 or 12 ft.	[illegible]
3	10	.178	.60	6 × 8 or 12 ft.	[illegible]
3	10	.267	.90	4 × 8 or 12 ft.	3.
3	10	.356	1.20	6 × 8 or 12 ft.	5.
3	6	.400	1.38	3.5 × 8 or 12 ft.	6.
3	6	.600	2.07	4.66 × 8 or 12 ft.	8.
4	16	.093	.42	4.5 × 8 or 9 ft.	2.
6	4	.245	.84	5 × 8 or 12 ft.	3.
6	4	.368	1.26	5 × 8 or 12 ft.	5.

CLAY PRODUCTS.

SEWER PIPE.—The inquiry at this time of year is usually small, and this one is no exception. Discounts are unchanged at 87% off the list for all sizes up to and including 24-in.; 78% for 27 and 30-in. and 73% for 33 and 36-in. At these discounts the net prices per ft. for carload lots, f. o. b. factory, are as follows:

2-in.	$0.026
3-	.026
4-	.032
5-	.039
6-	.052
8-	.076
10-	.102
12-	.13
15-	.175
18-	.245
20-	.293
21-	.35
22-	.39
24-	.42
27-	.99
30-	1.20
33-	1.70
36-	1.89

HOLLOW WALL TILE.—Prices continue steady and for hollow wall building tile, f. o. b. factory, Perth Amboy, N. J., are as follows:

Size.	Price per block, in cts.
4 × 12 × 12-in.	5.25
6 × 12 × 12-in.	6.6
8 × 12 × 12-in.	8.9
10 × 12 × 12-in.	10.5
12 × 12 × 12-in.	12.1

Fireproofing partition blocks are unchanged as follows:

Size.	Price per block, in cts.
2 × 12 × 12-in.	4.4
3 × 12 × 12-in.	4.4
4 × 12 × 12-in.	5.
6 × 12 × 12-in.	6.6
8 × 12 × 12-in.	8.8

These prices are for what would be considered small orders—approximately carload lots. For quantities which exceed $1,000 worth of material, concessions will be made.

DUCT TELEPHONE.—Business is fair. Small lots are sold at 4½ to 5 cts. per duct ft., but considerable concessions are made for desirable orders.

ROOFING TILE.—Prices are steady, and continue without change. The best grade of promenade roofing tile in flat blocks for high-grade roofs is sold at $20 per M. for run of kiln, and $30 per M. for selected. A cheaper form of tile with a smooth face can be had at $10 to $12, but it is not suitable for roof gardens. These prices are for 9 × 9 blocks, f. o. b. factory. It requires 258 blocks to lay 100 sq. ft. of roof surface and, in consequence, the price per 100 sq. ft. of roof surface would be $4 to $5 for the smooth blocks; $7.82 for the run of kiln, and $10.73 for the selected.

Vitrified tile, unglazed, of the French or Spanish type, is sold at approximately $8.50 per 100 sq. ft. of roof surface, f. o. b. factory. Glass tiles are sold at 60 cts. each. It requires 183 of these for 100 sq. ft. of roofing.

FLUE LINING.—Prices continue without change. The discount from list, f. o. b. mill, is 85%. Delivered in New York, in small lots, they can be had at 78%. Based on a discount of 85% at the mill, net prices are as follows:

	Weight in lbs.	Price per ft.
4½ × 8½-in.	14	$0.04½
4½ × 13 -in.	20	.068
4½ × 18 -in.	40	.15
6 × 12 -in.	22	.075
7 × 7 -in.	15	.053
8½ × 8½-in.	18	.068
8½ × 13 -in.	28	.098
8½ × 18 -in.	45	.135
12 × 16 -in.	45	.15
13 × 13 -in.	38	.128
13 × 18 -in.	57	.18
14 × 16 -in.	60	.165
16 × 16 -in.	65	.24
16 × 20 -in.	80	.30
18 × 20 -in.	75	.30

MILL SUPPLIES.

SHAFTING.—A strong effort is being made to maintain discounts, but there is more or less cutting. The automobile makers are buying more freely, but trade in general is small. The ruling discounts are larger than last month, and it is now possible to buy carload lots at 57% off. Small lots are obtainable at 52% off, and delivery is allowed in base territory.

The following net prices per foot are based on the 52% discount: ¾-in., 4 cts.; 1-in., 7 cts.; 1¼-in., 10.90 cts.; 1½-in., 14.20 cts.; 1¾-in., 19.10 cts.; 2-in., 25.50 cts.; 2¼-in., 32.50 cts.; 2½-in., 40 cts.; 2¾-in., 48.50 cts.; 3-in., 58 cts.; 3½-in., 85 cts.; 4-in., $1.08; 4½-in., $1.70; 5-in., $2.26; 5½-in., $2.90; 6-in., $3.70.

CHAIN BELTING.—Trade is satisfactory. Prices continue unchanged.

From 3 HP. to 10 HP. 30-in. centers complete, with two sprockets, $7 to $8 per HP.; from 10 HP. to 25 HP., 36-in. centers complete, $5 to $6 per HP.; from 25 HP. to 100 HP., 60-in. centers complete, $4 to $5 per HP.; from 100 HP. to 500 HP., 72-in. centers complete, $3 to $4 per HP.

PACKING.—Prices continue without change. The following quotations are for small lots in original packages.

Asbestos wick and rope, 13 cts.; sheet rubber, 11 to 13 cts.; pure gum rubber, 40 to 45 cts.; red sheet, 40 to 50 cts. Cotton packing can be had at 16 to 25 cts.; jute at 3¼ to 3½ cts., and Russian at 9 to 10 cts.

GRAPHITE LUBRICANTS.—Prices continue without change, as follows:

Engine flake graphite, 12 cts.; oiled graphite, 20 cts.; car box grease, 8 cts.; gear grease, for electric cars, 4¼ cts.; cup grease, 15 cts.; axle grease, 8½ cts.; automobile graphite grease, 16 cts.

Large consumers and jobbers can obtain considerable concessions from these figures.

BELTING.—The demand is only fair. Quotations are unchanged, the discount on rubber belting being 40% from list for the best grade; 40 and 10% for standard and 60 and 10% for competition. Leather belting is likewise without change at 55% discount for extra heavy; 60% heavy; 60 and 10% medium; 60 and 10 and 10% light; 70% shoulder, and 70 and 10% for standard.

The following net prices per ft. of rubber belting are computed at the above discounts. The price of leather belting is, as stated, unchanged from last month, and the prices may be found on page 61 of issue of Aug. 4

Width, inches.	2-ply.	4-ply.	6-ply.	8-ply.
3	$0.16	$0.22	$0.33	....
4	.21	.30	.45	....
5	.26	.44	.55	....
6	.30	.51	.65	$0.87
7	.36	.55	.75	1.01
8	.40	.57	.87	1.15
9	.46	.64	.96	1.30
10	.51	.72	1.01	1.44
12	.60	.86	1.30	1.70
14	.72	1.01	1.53	2.01
16	.83	1.17	1.76	2.35
18	.93	1.34	2.00	2.65
20	1.04	1.49	2.25	2.98
22	1.17	1.67	2.50	3.33
24	1.30	1.85	2.76	3.70
26	1.42	2.04	3.06	4.08
28	1.58	2.22	3.33	4.45
30	1.69	2.40	3.60	4.80
34	1.94	2.79	4.16	5.54
38	2.22	3.15	4.70	6.30
42	2.46	3.50	5.30	7.00
46	2.75	3.88	5.80	7.72
50	3.02	4.25	6.40	8.50
56	3.40	4.80	7.20	9.60
60	3.67	5.20	7.80	10.40

LUBRICATING OILS—Quotations continue without change, the following figures being named for 5-bbl. lots:

	Cts. per gal.
*Cylinder, dark	20 to 27
*Cylinder, steam, refined	14 to 22
Neutral Oils, filtered:	
Stainless white, 32 to 34 gravity	28 to 29
Lemons, 33 to 34 gravity	17 to 19
Dark, 32 gravity	15 to 18
Crank Case oil	15 to 17

*Prices are according to test.

HIGH-SPEED STEEL.—There is a very fair demand for all kinds of high-speed steel. Prices are without change at 50 to 75 cts. per lb.

COTTON WASTE.—Baled waste in New York is 10 to 11 cts. per lb.

FIRE HOSE.—Prices of hose are unchanged. The standard grade of underwriters' cotton rubber-lined hose, 2½-in. diameter warranted, 350 lbs. pressure, is sold in 50-ft. lengths, complete with couplings, at 65 cts. per ft. Common hose, 2½-in. diameter, tested to 200 lbs. pressure, is 35 cts. per ft.

PAVING MATERIAL.

Plans are now being made for the season's work, but no inquiries are being received for materials. It is expected that a great deal of paving will be done next year.

ROAD OILS.—Prices continue unchanged, 30% asphaltum oil being quoted at 4 cts. per gal. Texico macadam asphalt, 90 to 95%, is 11 cts. per gal., f. o. b. New York or Philadelphia; A or X Tarvia in bbls. is 8½ to 9½ cts. per gal.; B grade in bbls. is 7 to 8 cts. per gal.

GRANITE BLOCK.—Prices are steady. Cape Ann blocks, delivered in New York City, are sold at $1.60 to $1.75 per sq. yd. Dressed block to lay with ¼-in. point is $2 to $2.10 per sq. yd.

ASPHALTUM.—Prices of asphaltum are steady and firm. Trinidad is quoted at $25 per net ton. California asphaltum is $26 to $30 per net ton f. o. b. New York and $16 to $19 at point of shipment.

PAVING BLOCKS, WOOD.—Prices continue without change, as follows: For long leaf yellow pine blocks having not less than 20 lbs. oil per cu. ft., $1.85 is quoted for 3-in. block; $2.05 for 3½-in. block and $2.25 for 4-in. block. All these prices are per sq. yd., f. o. b. New York.

VITRIFIED BRICK.—Quotations are more or less nominal. Prices are unchanged at 55 to 70 cts. per sq. yd. at point of shipment.

LUMBER.

Trade is quiet and there is little or no new business. The conditions in the lumber trade are well outlined in the following, taken from the "Lumber Trade Journal," New York:

"Our own opinion is that the business conditions so far as lumber is concerned do not warrant any extremely optimistic view, speaking generally. So far as this city is concerned we can see no prospect of a very large business next year so far as building operations are concerned. Many sections of the city are overbuilt. There are empty tenements in sections where to build more, until the growth of the city catches up with the supply, would be foolish.

"Generally speaking, we believe conditions throughout the East and elsewhere are much better outside than they are inside of New York City, and we are inclined to think that general business in lumber will be more satisfactory next year than it has been the year that is passed.

"The one thing, however, that stands out prominently in our minds is this: That there is nothing to be gained in a general way by cutting prices. The present prices of lumber will not deter anybody from using it that has use for it. Therefore we advise no cutting in prices. It would be extremely foolish to resort to any such method as this to move stock. We advise a curtailment of supplies so far as possible to meet the prevailing conditions, and in crossing into the new year, while, as we have said before, we have no very optimistic feeling concerning business in general so far as lumber is concerned, yet are inclined to think that present prices are bottom prices, and that, generally speaking, it will not be possible to buy lumber during the year 1911 below the prices at present prevailing, with the tendency higher."

LONG LEAF YELLOW PINE.—Business is quiet. The demand for long sticks is limited and there is little new work in sight. Prices are unchanged and for delivery from yard in New York and vicinity, for material classed as "Merchantable" under the 1905 rules of the Association prices are as follows:

Prices per Thousand Feet in Yard, New York.

	Length— 20 ft. base.	21 to 25 ft.	26 to 30 ft.	31 to 35 ft.
8 in. wide and under by 8 in. thick and under	$31	$32	$33	$34
10 in. wide by 10 in. thick and under	33	34	35	36
12 in. wide by 12 in. thick and under	36	37	38	39
14 in. wide by 14 in. thick and under	43	44	46	46
16 in. wide by 16 in. thick and under	45	46	47	48

For pieces longer than 35 ft. and less than 40 ft. add from $4 to $8 to base price.

NORTH CAROLINA PINE.—Prices are without change as follows: For pieces 20 ft. long and less, in car lots, New York prices per thousand are as follows:

2 × 4-in.	$18	2 × 10-in.	$21
2 × 6-in.	18	2 × 12-in.	22
2 × 8-in.	18		

HEMLOCK.—The base price of Pennsylvania hemlock continues without change at $21. West Virginia can be obtained at $20.50. The following prices are ruling in New York:

Price Per Thousand f. o. b. cars New York.

Size.	Length— 10 ft.	12 ft.	14 ft.	16 ft.
2 × 4-in.	$23.00	$21.00	$21.00	$23.00
2 × 6-in. to 2 × 10-in.	21.00	21.00	21.00	18 to 20
3 × 4-in. to 12 × 12-in.	21.50	21.50	22.00	19 to 21
1 × 8-in.	....	18.00	18.00	18.00
1 × 10-in. and 1 × 12-in.	....	18.50	18.50	18.50

CROSS TIES.—The railways have contracted for ties more freely in the last month but there is no especial activity. The following prices, quoted f. o. b. New York by J. S. Baxter Co., 15 William St., New York City, are without change from last month as follows:

	Cents each.
7 × 9-in. by 8 ft. 6-in.	79
6 × 9-in. by 8 ft.	74
6 × 8-in. by 8 ft.	69

Second-class, sound and square edge, are quoted as follows:

	Cents each.
7 × 9-in. by 8 ft. 6-in.	63
6 × 9-in. by 8 ft.	53
6 × 8-in. by 8 ft.	47

OILS AND PAINTS.

PETROLEUM PRODUCTS.—The demand is fair, and prices are steady.

The Standard Oil Co. quotes the prices of crude oil in bbls. at the wells as follows: Pennsylvania, Second Sand and Tiona, $1.30; Mercer black is 87 cts.; Corning, 77 cts.; New Castle, 84 cts.; Corning, 77 cts.; Illinois, 60 cts.; Illinois heavy, below 30 gravity, 52 cts.; Kansas heavy, 30 cts.

In the New York market petroleum from tank wagon is unchanged at 6 cts. per gal.

Auto naphtha and stove gasoline is unchanged at 13¾ cts.

Fuel oil is 90 cts. to $1 per bbl.

LINSEED OIL.—The demand is only moderate, and sellers of oil have again reduced their quotations. Consumers have not been attracted by these reductions. Linseed oil is now quoted at 90 to 91 cts. per gal.

SPIRITS TURPENTINE.—The market is more active, and prices are slightly higher. Stocks in the South are being slowly depleted. Spirits in New York are held at 80 to 81 cts. In Charleston, S. C., the price is 76 cts., and in Savannah, Ga., 77 cts.

PAINTS.—The demand continues small. Prices of white lead in oil are unchanged. For lots of 500 lbs. or over, in 250 and 500-lb. kegs, 7½ cts. per lb. is quoted; in 25 and 50-lb. kegs, 7¾ cts. is quoted. Red lead and litharge in bbls., half bbls. and 100-lb. kegs, is 8 cts. per lb.

Graphite paint is moving slowly. The best grades of graphite paint in linseed oil can be purchased at $1.40 per gal.

Hydox preservative paint is 75 cts. per gal. in bbl. lots, New York City.

Colors in oil are quoted at the following prices per lb.: Lamp black, 12 to 14 cts.; Chinese blue, 36 to 46 cts.; Prussian blue, 32 to 36 cts.; Van Dyke brown, 11 to 14 cts.; Chrome green, 12 to 16 cts.; Raw or Burnt Sienna, 12 to 15 cts.; Raw or Burnt Umber, 11 to 14 cts.

CHEMICALS.

There have been no price changes during the month. The following quotations are named for delivery in New York City for lots of fair size:

	Cts. per lb.
Nitric acid, 30°	3.87½ to 4.25
Nitric acid, 40°	4.50 to 4.87½
Sulphuric, 60°	0.90 to 1.00
Sulphuric, 66°	1.00 to 1.25
Sal Ammoniac, lump	9.25 to 9.75
Sal Ammoniac, granulated	5.87½ to 6.00
Sal Ammoniac, gray	6.00 to 6.25
Sulphur, roll	1.85 to 2.15
Sulphur, flour	2.00 to 2.40
Sulphur, flowers	2.20 to 2.60
	Per gallon.
Alcohol, grain, U. S. proof	$2.54 to $2.57
Alcohol, denatured, 5-bbl. lots	.41 to .42
Alcohol, denatured, ½-bbls	.46 to .47
Alcohol, wood, 95 to 97	.52 to .57
Alcohol, wood, purified	.80 to ..

LINE CONSTRUCTION.

ALUMINUM WIRE.—The demand is limited and prices are without change at 31 cts. base.

POLES.—Cedar poles are quoted as follows by the R. D. Dowie Pole Co., 432 New York Block, Seattle, Wash. The price is f. o. b. loading point:

Length in ft.	Diameter at top— 8-in.	9-in.
30	$2.70	....
35	3.15	3.50
40	3.60	4.00
45	...	4.50
50	...	5.00
55	...	5.50
60	...	7.20
65	...	9.75
70	...	10.50
75	...	11.25
80	...	12.00

White cedar poles are quoted by the Backus-Judd Lumber & Cooperage Co., Minneapolis, Minn., f. o. b. Rex, Mich, freight rate to Chicago 12 cts., as follows:

Length in feet.	Price each — Diameter at top— 5-in.	6-in.	7-in.
25	$0.65	$1.10	$1.50
30	...	1.60	3.75
35	...	4.00	5.00
40	...	5.25	7.00
45	...	7.25	9.50
50	...	10.00	11.00

Chestnut poles, f. o. b. Mechanicsville, N. Y., are quoted by T. C. Luther of that place as follows:

Length in feet.	Price each — Diameter at top— 5-in.	6-in.	7-in.
25	$1.50	$2.00	$2.75
30	2.50	2.75	3.25
35	2.75	3.25	4.00
40	3.25	4.00	5.50
45	4.00	5.50	7.50
50	5.50	7.50	9.50

FIR CROSS ARMS.—Prices are unchanged as follows:

Length. Size, 3¼ × 4¼-in.	Price per arm in cts. — Pacific Coast.	Chicago.	New York.
3 ft., 2-pin	8	13½	15½
4 ft., 2-pin	11	18½	21
5 ft., 4-pin	16	26½	28½
6 ft., 4 and 6-pin	20½	31½	36
8 ft., 6 and 8-pin	28	43	48½
10 ft., 8, 10 and 12-pin	37	55½	67½

TELEGRAPH WIRE.—For lots of fair size, the wire measured in Birmingham wire gage, the prices in cts. per lb. are as follows: "Extra Best Best," Nos. 6 to 9, 4¾ cts.; Nos. 10 and 11, 4¼ cts.; No. 12, 4¾ cts.; No. 14, 5¼ cts. "Best Best," Nos. 6 to 9, 3¼ cts.; Nos. 10 and 11, 3¾ cts.; No. 12, 3½ cts.; No. 14, 4 cts. Actual freight is allowed from Trenton, N. J., where it does not exceed 25 cts. per 100 lbs.

INSULATORS.—Prices are without change. Glass insulators in lots of more than 1,000 and less than 10,000 are sold at the following prices per 1,000: Double petticoat, 20 oz., $33; Western Union, $30.25; No. 2 cable, $53.90; No. 4 cable, $210; Muncie type, 7-in., $236.50; No. 3 triple petticoat, 4½-in., $90.75.

COPPER WIRE.—Business is very light, and prices are more or less mixed. Wire can be had at 13.75 to 14.25 cts. base. The tonnage now being sold is large, compared with any but the boom years, and there is a fair prospect that business will improve next spring. No. 8 wire is selling at 14 to 14.25 cts. per lb. base.

A review of the copper market will be found under "Metals," in another part of this supplement.

GLASS.

WINDOW GLASS.—Prices are lower, due to the fact that the Imperial Window Glass Co. cut its price some time ago to facilitate the winding up of its affairs. It is recalled that the officers of the company appeared before the United States District Court and submitted themselves to sentence for violating the Sherman Anti-Trust act. They also promised to discontinue business.

New discounts are 90 and 15% from jobbers' list for all sizes of single and double strength.

The net prices per box of 50 sq. ft., at the discount named, are as follows:

American Window Glass.

Size of Glass, Ins.	Single Thickness, Price per box, 50 sq. ft. — A.	B.
6 × 8 to 10 × 15	$2.27	$2.16
11 × 14, 12 × 13 to 14 × 20	2.37	2.27
10 × 26 to 16 × 24	2.55	2.40
18 × 22, 20 × 20 to 20 × 30	2.70	2.50
15 × 36 to 24 × 30	2.80	2.55
26 × 28 to 24 × 36	2.95	2.65
26 × 34, 28 × 32, 30 × 30 to 30 × 40	3.27	2.85
32 × 38, 34 × 36 to 30 × 50	3.80	3.25
30 × 52 to 30 × 54	4.05	3.55

VAULT LIGHTS.—Prices continue without change. Contractors furnishing their own molds can obtain glass at from 4 to 5 cts. per lb. Bull's eyes, 3-in. in diameter, are 3 cts. each, and square lights, 3½ × 3½, are 5 to 6 cts. each.

SKYLIGHT GLASS.—Trade is dull, and there is little new work in prospect. Prices continue without change from the last report, as follows:

Thickness, Ins.	Price per sq. ft.
1/8	7 cts.
3/16	10 cts.
1/4	15 cts.

Wired skylight glass, ¼-in. thick, is 25 cts. per sq. ft.

PLATE GLASS.—The price is unchanged from last month at 89% discount from list.

In the accompanying table the net price of polished plate glass is figured at this discount. These prices apply to the glass only, an extra charge being made for boxing or cutting to special sizes.

NET PRICES OF POLISHED PLATE GLASS IN DOLLARS.

Length, feet.	Width, Feet 1	1.5	2	2.5	3	3.5	4	4.5	5	6	7	8	9	10
1	$0.24	$0.38	$0.50	$0.66	$0.86	$1.04	$1.18	$1.38	$1.52	$2.40	$2.86	$3.25	$3.75	$4.17
1.5	....	.59	.86	1.10	1.42	2.10	2.40	2.76	3.08	3.75	4.38	5.00	5.70	6.90
2	....	....	1.18	1.59	2.40	2.86	3.25	3.75	4.17	5.00	5.90	6.85	7.85	8.90
2.5	....	....	....	2.55	3.08	3.68	4.20	4.70	5.30	6.40	7.60	8.90	10.10	11.10
3	....	....	....	....	3.75	4.40	5.00	5.75	6.90	7.90	9.40	10.70	12.25	13.60
3.5	....	....	....	....	....	5.20	5.90	6.75	7.60	9.40	11.10	12.70	14.40	15.90
4	....	....	....	....	....	....	6.86	7.90	8.90	10.70	12.70	14.50	16.40	18.20
4.5	....	....	....	....	....	....	....	9.10	10.10	12.25	14.40	16.40	18.40	20.50
5	....	....	....	....	....	....	....	....	11.10	13.60	15.90	18.20	20.50	27.00
6	....	....	....	....	....	....	....	....	....	18.20	19.00	21.80	25.00	27.80
7	....	....	....	....	....	....	....	....	....	....	22.20	26.00	29.40	32.50
8	....	....	....	....	....	....	....	....	....	....	....	29.70	33.50	37.30
9	....	....	....	....	....	....	....	....	....	....	....	....	38.00	42.00
10	....	....	....	....	....	....	....	....	....	....	....	....	....	47.50
11	4.60	7.20	9.80	12.50	15.00	17.50	20.00	22.60	26.00	30.60	36.20	41.20	47.20	65.00
12	5.00	7.90	10.70	13.60	16.40	19.00	21.80	25.00	28.00	33.50	39.30	44.80	63.50	70.80
13	5.50	8.70	11.80	14.80	17.75	20.80	24.10	27.20	30.10	36.40	43.50	61.50	69.00	112.50
14	5.90	9.40	12.70	15.90	19.00	22.25	26.00	29.20	32.50	39.40	46.70	66.00	109.00	146.30
15	....	....	....	....	....	24.40	28.00	31.30	34.80	42.00	61.80	70.80	141.00	163.50
16	....	....	....	....	....	33.00	37.80	42.50	47.20	55.50	66.00	109.00	157.00	202.00
17	....	....	....	....	....	35.00	40.00	45.30	50.00	60.00	70.30	143.00	192.00	294.00
18	....	....	....	....	....	38.00	42.50	47.80	53.20	63.50	109.00	157.00	280.00	311.00

METALS.

COPPER.—The copper metal trade has been in a well-defined state of deadlock between consumers and the leading sellers during the last two-thirds of December. In part due to this, the aggregate of sales for the month is probably the lowest for any similar period of 1910. Early in December electrolytic and lake copper were both selling at 13 cts., and the outlook for a good buying movement was considered favorable. Pending the publication of the November statistics, buyers hesitated to close on inquiries, and when it was learned Dec. 8 that production had been curtailed only about 50% of what consumers had expected, they were less disposed to fill their requirements, except at a reduction in price. The large producers were more favorably impressed by the statement, however, and refused to make attractive concessions, and the deadlock developed. Since that time sales of the metal have been negotiated principally between consumers, and small producers and dealers. The prices have been shaded to 12.75 cts. delivered 30 days, and 12.62¼ cts. cash New York, for electrolytic, and 12.87½ cts. for lake. Coincident with the above developments, manufacturers of copper products began to complain of a reduced volume of orders for their goods, which prompted further conservatism in contracting for raw material. The relatively small supply of copper available from outside sources under 13 cts. became ample, under these conditions. It is reasonably certain that a large total of inquiries were allowed to go stale by refusing concessions just after the report of the Copper Producers' Association was published.

Considered in the light of the statistics alone, however, there was really little justification for a decline in the price of copper. The report showed the smallest surplus held in first hands in the United States since April; that production was 119,353,463 lbs., or 7,115,821 lbs. less than it was in October. Domestic deliveries were 60,801,992 lbs., and deliveries for export were 67,424,316 lbs., which reduced stocks on hand from 139,261,914 lbs. to 130,389,069 lbs.

In addition to the favorable domestic statistics, the foreign fortnightly reports have continued to show declines in European stocks of copper, and views on foreign trade conditions are favorable. The total visible stocks in Europe on Dec. 15 were 193,200,000 lbs., compared with 236,857,600 lbs., Dec. 31, 1909.

TIN.—December has been another month of syndicate control of the pig tin market. The fluctuations in value have been wide and violent, covering a range of over 3 cts. in the local market and ending the month with a net gain of 1 ct. a lb. This has been achieved without regard to fundamental trade conditions, which have not been such as usually warrant an advance in values. Technically, though, the light demand from domestic consumers was sufficient to materially assist the manipulators to put the price up and users of the metal in America have paid their share of the syndicate's profits.

The closing price of spot tin in New York at the end of the month is 38.25 cts.

MISCELLANEOUS METALS.—Small lots of metal and metal products can be obtained from jobbers' stores, New York, at the following prices:

	Per lb.
Bismuth	$2.25
Brass tubes, iron pipe sizes:	
½-in.	.19
¾ to 3-in.	.18
3½-in.	.19
4-in.	.20
Brass, sheets	.14¼
Brass, rods	.14¼
Solder, ¼ and ½ guaranteed	.24
Zinc sheets	.08½
Manganese bronze rods	.16
Manganese bronze in crucible form	.14
Money metal, ingot	.16

OLD METALS.—Miscellaneous lots of scrap metal amounting to about a ton can be sold to dealers in New York at about the following prices:

	Cents.
Copper, heavy and crucible	11.00 to 11.25
Copper, heavy and wire	10.75 to 11.00
Copper, light and bottoms	9.75 to 10.00
Brass, heavy	7.25 to 7.50
Brass, light	5.75 to 6.00
Heavy machine composition	9.75 to 10.00
Clean brass turnings	7.25 to 7.50
Composition turnings	8.25 to 8.50
Lead, heavy	3.75
Lead, tea	3.50
Zinc, scrap	4.00

LEAD.—A difference of between 2½ and 5 points prevailed in the asking price of pig lead by the two interests early in the month. Later, however, the independents lowered their price to 4.50 cts. in New York, which placed them on the same basis as the American Smelting & Refining Co.

One of the most favorable indications concerning the pig lead industry to appear during the month is the following referring to the St. Joseph Lead Co.:

"The company produced 62,000 tons of lead during the calendar year and has less than 2,500 tons on hand. In 1909 the output was 53,000 tons, and 8,800 tons of that amount was held by the company on Dec. 31, 1909."

If this proves a reliable indication of general conditions among lead producing interests it will be a pleasant surprise, as the general view of the lead situation has not been quite so optimistic.

SPELTER.—A decided change of front took place among the interests that advanced spelter to above 6 cts. in November, but what caused it, apparently has no explanation. The price began to decline around Dec. 15, and without making the slightest resistance has declined to 5.50 cts. in New York. The consumptive demand has been very light and through the month this can be attributed in part to the unsettled state of the market.

MISCELLANEOUS.

ROPE.—Prices continue without change, the demand being small.

Pure Manila is 8¾ to 9¼ cts. per lb.; second grade, 7¾ to 8¼ cts.; hardware grades, 7¼ to 7¾ cts. per lb. Pure Sisal is 6¾ cts. for the highest grades, and 6¼ cts. for less desirable grades. Jute rope in commercial sizes is 5¼ to 6¼ cts. per lb.

ROOFING SLATE.—There is little demand for roofing slate, and prices continue unchanged. Quotations are named per "square" or 100 sq. ft. of roof surface in carload lots of the sizes in most general use, f. o. b. quarry station:

	Per 100 sq. ft.
Vermont, sea green	$4.00 to $4.50
Pennsylvania, Bangor Ribbon	4.00 to 4.50
Maine, Brownsville No. 1	6.00 to 7.75
Maine, Brownsville No. 2	5.60 to 6.00
Red	10.50 to 12.25
Unfading green	4.50 to 5.00
Genuine Bangor	4.50 to 6.00
Pen Argyle	4.00 to 4.50

OAKUM.—The price of oakum continues unchanged, the best grades selling at 6¼ cts. U. S. Navy is 5¾ cts., and plumbers' oakum is 2¼ cts.

PINE TAR.—The demand is fair and prices are steady. Kiln is quoted at the unchanged price of $7.50, and Retort at $7.25. These prices are per bbl. of 480 lbs.

WATERPROOFING.—The prices for carload lots, f. o. b. cars New York, are as follows: Hydrex waterproofing felt, $1.25 per 100 sq. ft.; Hydrex compound "A," 26 cts. per gal.; Hydrex compound "B," 18 cts. per gal.

Texaco waterproofing cement is $30 per ton in car lots, f. o. b. cars New York or Philadelphia.

Asphaltum for waterproofing is sold at $25 to $27 per net ton.

Glidden's graphite acid proof coating is sold at $1.25 per gal. in bbl. and ½ bbls., and $1.40 per gal. in 5-gal. cans. These prices are f. o. b. Cleveland or for delivery from warehouse, New York, Chicago, St. Louis, Boston or Atlanta.

Portland cement waterproofing by the McCormick Process is sold by the makers, McCormick Portland Cement Co., at 7 cts. per lb., delivered at the nearest railroad station, subject to the following discounts: Less than ton lots, 2%; less than fiv[illegible]ons, 5%; less than ten tons, 5 and 2%; le[illegible]han 20 tons, 5 and 5%; less than 30 to[illegible] and 7½%.

ROOFING CEMENT.—Pr[illegible] are unchanged at $25 per ton for [illegible]aco.

EXPLOSIVES.—Dynamite [illegible]e kind usually used by contractors [illegible]proximately 11 to 13 cts. per lb., f. o. b. [illegible]ory, in ton lots. Blasting powder, clas[illegible] as "soda" grade, is sold at $1.20 to $1[illegible] per keg. of 25 lbs. in lots of 10,000 lbs[illegible] following prices prevail on Trojan [illegible]rload lots, minimum 24,000 lbs., f. o. b. [illegible]ific Coast points: No. 1, 13½ cts.; No[illegible] 10½ cts.; No. 3, 10 cts. They have a [illegible]tive force equivalent to 60%, 40% and [illegible] of nitroglycerine.

Exploders, per hundred, a[illegible]d at the following prices: 4 ft., $3.60[illegible] $4.10; 8 ft., $4.60; 10 ft., $5.10; 12 [illegible] $5.60; 16 ft., $6.60; 20 ft., $7.50; 24 ft.[illegible]0; 30 ft., $12; 36 ft., $14.60.

Caps in lots of 10,000 are [illegible] $8 per thousand.

Blasting machines for 10 h[illegible] are $12; 25 holes, $20; 50 holes, $40; [illegible]les, $60.

PAPER.—Prices are withou[illegible]ge from last month, as follows:

Tarred Paper:	Per roll of [illegible]8 sq. ft.
Standard, 2-ply, 40 lbs.	$0.45
Extra heavy, 2-ply, 45 lbs.	.55
Standard, 3-ply, 60 lbs.	.65
Extra heavy, 3-ply, 70 lbs.	.75
Rosin Sized Sheathing:	Per roll of [illegible] sq. ft.
Light, 35 lbs.	$0.38
Medium, 30 lbs.	.45
Heavy, 40 lbs.	.60

ASBESTOS.—Asbestos buildin[illegible] felt and sheathing in less than ton lots [illegible]3¼ cts. per lb. for the light, weighing fro[illegible] 6 to 30 lbs. per 100 sq. ft.; 4 cts. per lb [illegible] charged for the heavy weighing from 45 [illegible] 56 lbs. per 100 sq. ft.

Millboard is made in standard sheets, 40 × 40 ins., and 41 × 4 ins. It varies in thickness from 1-32 to ½-in., and in weight from 2 to 27 lbs. per sheet. The net price in 100 lb. lots is 5 cts. per lb.

Transite, asbestos wood, used for fireproofing, ventilators and smoke jacks, comes in standard sheets, 36 × 48 ins., 42 × 48 ins., and 42 × 96 ins. The prices, f. o. b. factory, Nassau, N. H., are as follows:

Thickness.	Weight.	Price.
⅛-inch	1 lb.	$0.08
3/16-inch	1½ lbs.	.12
¼-inch	2 lbs.	.16
5/16-inch	2½ lbs.	.20
⅜-inch	3 lbs.	.28
7/16-inch	3½ lbs.	.28
½-inch	4 lbs.	.32
9/16-inch	4½ lbs.	.36
⅝-inch	5 lbs.	.40
¾-inch	6 lbs.	.44
⅞-inch	7 lbs.	.48
1 inch	8 lbs.	.52
1¼ inches	10 lbs.	.56
1½ inches	12 lbs.	.64
1¾ inches	16 lbs.	.72
2 inches	16 lbs.	.80

RUBBER.—Prices of rubber have again declined. Up-River Para Coarse is below the even figure for the first time this year, being quoted at 98 cts. Up-River Para Fine can be had at $1.33 to $1.38 per lb. This grade of rubber sold as high as $2.40 in the early part of last year. Caucho ball is practically unchanged at $1 to $1.05.

LIGHTERAGE LIMITS.—The free delivery or "Litherage Limits" in New York City are as follows: In Manhattan, from a point opposite the Fort Lee ferry, south along the Hudson River around the Battery and north along the East and Harlem Rivers to the Jerome Ave. Bridge at 155th St. In New Jersey, south from Fort Lee ferry to Bayonne City, points on the north and east shore at Staten Island, between Bridge Creek (Arlington) and Clifton, both inclusive, and including Elm Park, Eristina and Shooters Island. In Brooklyn, from 69th St., Bay Ridge, north to Port Cove, Astoria, Long Island City.

TRADE PUBLICATIONS.

(Continued from page 12.)

TUBE WELL STRAINERS.—A. D. Cook, Lawrenceburg, Ind. Paper; 6 × 9 ins.; pp. 4; illustrated.

The strainers are of seamless brass tubes, with slot cuts so made as not to choke. The device is described and there is a list of the several sizes.

DRYERS, KILNS AND CRUSHERS.—Sterrit-Thomas Foundry Co., 32d and Smallman Sts., Pittsburg, Pa. Paper; 9 × 6¼ ins.; pp. 16; illustrated.

The machinery illustrated includes rotary kilns and dryers, grinding pans and rock crushers of the toggle type. The descriptions in each case are very brief.

INJECTORS AND STEAM FITTINGS.—Penberthy Injector Co., Detroit, Mich. Paper; 5¼ × 8¼ ins.; pp. 80; illustrated.

This is the December number of the company's house organ. In addition to advertisements of the Penberthy appliances it includes those of other firms. It has notes on mechanical matters.

A MANUAL OF THE PRINCIPAL INSTRUMENTS USED IN AMERICAN ENGINEERING AND SURVEYING.—W. & L. E. Gurley, Troy, N. Y. Cloth; 4½ × 6¾ ins.; pp. 516; illustrated; 45th edition. 50 cts.

In addition to detailed descriptions of various instruments particulars are given as to their use. About 240 pages are devoted to transit, levels, plane tables, surveying compasses and minor field instruments, current meters (25 pages), tapes, etc. The remainder of the book is occupied mainly by a comprehensive catalog and price list of field and office instruments, drafting materials and appliances, and such miscellaneous appliances as rain gages, miners' safety lamps, anemometers, registering thermometers, telescopes and field glasses, etc., etc.

HOISTING ENGINES.—S. Flory Mfg. Co., Bangor, Pa. Paper; 4½ × 7 ins.; pp. 120; illustrated.

This catalog is a very complete treatise on hoisting engines, both steam and electric. Hoisting apparatus, suspension cableways, dredging, logging and slate working machinery are quite fully covered with descriptions of machinery, price lists, code words, etc.

PNEUMATIC HOISTING MACHINERY.—Detroit Hoist & Machine Co., Detroit, Mich. Paper; 6 × 9 ins.; p. 32; illustrated.

This catalog describes pneumatic geared hoists of from 1 to 12½ tons capacity. The power element is a reciprocating engine driven by compressed air. Power is transmitted from the engine crank-shaft to the hoisting drum through spur gearing. The engine has two double-acting, oscillating cylinders set at 90°. This gives a very compact construction.

Some of the illustrations show these hoists combined with I-beam trolleys. The trolleys are supplied with hand-chain propulsion or with a separate pneumatic motor. Two styles of more elaborate pneumatic traveling cranes are illustrated. Other applications of the compressed-air engine are suggested in half-tones showing it applied to a portable winch, pillar crane, centrifugal pump, etc. The last few pages deal with cylinder air hoists and hand-chain hoists. Price-lists are given.

A peculiar and inconvenient feature of this catalog is the publication of the best sectional view of the pneumatic motor hoist on the last page, entirely apart from all the other illustrations and description of this type of machinery.

GASOLINE TRACTION ENGINES.—Fairbanks, Morse & Co., Wabash Ave. and Eldredge Place, Chicago, Ill. Catalog No. TV., 457. Paper; pp. 8; illustrated.

The traction engine, described in this catalog, is driven by a 25-HP., one-cylinder, horizontal, water-cooled, four-cycle gasoline engine of the usual Fairbanks-Morse construction. Make-and-break ignition is used with current from a magneto. Dry batteries are provided for starting. The cooling water is circulated by a belted centrifugal pump and is kept cool by means of a screen cooling tank mounted at the front end of the frame. The tank has a peaked top consisting of two inclined screens. The heated water from the jackets is delivered at the peak of the tank and runs down over the screens, being cooled by evaporation. The engine is started by means of a hand pump with which the initial charge of air and gasoline mixture is forced into the cylinder.

The transmission of power from engine to rear wheels is through a friction clutch, differential shaft and spur gearing. Only one gear ratio and a reverse are provided. The ratios are 1:20 forward and 1:32.5 on the reverse. Speeds of from 1.7 to 2.5 mi. per hr. are obtained by varying the engine speed from 175 to 250 r. p. m. The maximum drawbar pull available, after allowing for efficiency of transmission, should be about 2,700 lbs.

The same clutch is made to serve for both the drive and the belt pulley.

The truck frame is made of structural steel channels and I-beams. A removable canopy top of galvanized steel roofing is provided. The diameter of the rear wheels is 72 ins., with 20-in. face and diagonal cleats of malleable iron.

Some of the illustrations show the traction pulling gang plows. It is stated that it will plow on level tame sod from 8 to 12 acres per 10-hr. day. For stubble land, the figure given is 12 to 15 acres per day. In tame sod it pulls four 14-in. plows turning a furrow 5 ins. deep, and in stubble land five 14-in. plows. One man is required on the engine and another on the plows.

Situations Open

WANTED.—General Superintendent to take charge of quarries and plant in Kentucky; must give best of reference, and have experience. Permanent position to right party. Address "X. A. 1," Engineering News, New York. 1-1t